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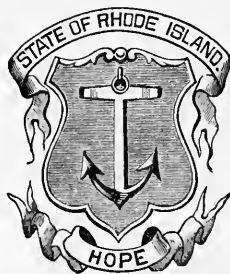
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THIRTEENTH ANNUAL REPORT
OF THE
STATE BOARD OF HEALTH,
OF THE
STATE OF RHODE ISLAND,
FOR THE YEAR ENDING DECEMBER 31, 1890.
AND INCLUDING THE REPORT UPON THE REGISTRATION OF
BIRTHS, MARRIAGES AND DEATHS IN 1889.



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1891.



MEMBERS
OF THE
RHODE ISLAND STATE BOARD OF HEALTH.
DECEMBER 31, 1890.

Post Office Address.

ALBERT G. SPRAGUE, M. D., *Chairman* RIVER POINT..... KENT COUNTY.
SAMUEL M. GRAY, C. E. PROVIDENCE PROVIDENCE CO.
PAUL S. REDFIELD, M. D. PROVIDENCE PROVIDENCE CO.
HENRY S. SWAN, M. D. BRISTOL..... BRISTOL COUNTY.
ALVIN H. ECCLESTON, M. D. WOOD RIVER JUNC.. WASHINGTON CO.
PETER CURLEY, M. D. NEWPORT..... NEWPORT COUNTY.
CHARLES H. FISHER, M. B., *ex-officio and Secretary*.. PROVIDENCE PROVIDENCE CO.

GENERAL CONTENTS.

GENERAL REPORT.

REPORT OF THE SECRETARY.

HEALTH IN THE TOWNS, 1890.

REPORTS OF MEDICAL CORRESPONDENTS—PREVALENCE OF
ACUTE DISEASES IN THE TOWNS.

REPORTS OF TOWN CLERKS IN RELATION TO SANITARY
IMPROVEMENTS IN THE TOWNS.

REPORTS OF HEALTH OFFICERS.

TABLES OF COMPARATIVE PREVALENCE OF DISEASES,
SEVEN YEARS.

METEOROLOGY.

VITAL STATISTICS.

CATTLE COMMISSION.

FOOD AND DRUG ADULTERATION.

WATER ANALYSIS.

PUBLIC STATUTES, CHAPTER 83.

ADDITIONS TO THE LIBRARY.

INDEX.



GENERAL REPORT.

To the Honorable the General Assembly:

In behalf of the State Board of Health, the Secretary herewith respectfully presents the Thirteenth Annual Report of the Board, as required by Chapter 85 of the Public Statutes.

The proceedings of the Board and the work reported are for the year ending December 31, 1890.

It is gratifying to be able to state, that the increasing recognition on the part of the intelligent public, of the necessity of employing proper measures for the preservation of health and the prevention of diseases, and especially of contagious, and infectious diseases, to which allusion was made in the previous report as having evident existence, is at this time still more evident.

It was then remarked substantially that the fact of the gradual progress and decided advance in the sanitary sentiments of the general public, had been shown by the action of the various town authorities in the enactment of sanitary ordinances, with increasing stringency and better enforcement from year to year; by the demands of the people for pure or good water, as shown by the frequent requests for the inspection of wells, public and private, and by the eager inquiries as to the means of obtainment of good water by water works and otherwise; by the more universal demand for the abatement of nuisances believed to be prejudicial to health; by the more general practice in most of the compact localities, of the prompt removal of garbage and house refuse, and the earnest discussion of and experimentation for ascertaining the best methods of disposal; by the largely increased number who seek after and read the various sanitary publications of the day; by the greater attention paid to personal cleanliness, as shown by the larger purchase of and larger inquiry as to appliances for household ablutions; by the better appreciation of

the necessity of good ventilation; by greater attention to drainage and other methods of the disposal of household and other sewage, and by the more ready compliance with the requirement of the isolation of those sick with infectious and contagious diseases, and the disinfection of the excreta of the same, and of articles and premises connected with and in the near vicinity of the same.

PERSONNEL OF THE BOARD.

At the January Session of the General Assembly, the Senate approved of the appointment by Governor H. W. Ladd, of Alvin H. Eccleston, M. D., of Richmond, to the vacancy in the membership of the Board from Washington County, occasioned by the removal from the State of Herbert J. Pomroy, M. D., of Westerly.

The term of membership of Henry E. Turner, M. D., of Newport, member from Newport County, expired by limitation, June 30th, and Governor J. W. Davis appointed as his successor Peter Curley, M. D., of Newport, whose appointment was approved by the advice and consent of the Senate at the May Session of the General Assembly.

MEETINGS OF THE BOARD.

There were four regular meetings of the Board, and one special meeting called during the year.

A general outline only of the transactions at the different meetings will be given, the details of propositions, discussions, and reading of communications and other documents, largely omitted, as also names of parties, locations and circumstances connected with nuisances, and with other matters of inquiry and investigation.

At the first regular quarterly meeting, on Thursday, the 16th day of January, and adjournment to Friday, February 21st, the proceedings were in part as follows :

The usual routine business regarding the general affairs of the Board were first in order, and were fully considered and action taken thereon.

The Secretary then gave an account of his work during the previous quarter and for the year 1889. As the year includes the quarter, an abridged outline will herein be given for the year. He had made sanitary inspections of the hotels and larger boarding houses in all the shore towns where such inspections were requested by the health

officers of the same, reports of which had been previously made to the Board. He had also visited several towns during the warm season, inspecting nuisances suspected of being dangerous to health, either in company with the health officer or alone, giving advice in relation to methods of abatement when necessary ; had traversed numerous villages, large and small, in the State, inspecting the quality of the water in most general use, and the sources of supply ; the drainage of the houses, and disposal of night soil and other organic filth. Suggestions as to urgently needed changes were made to individuals, corporations or town authorities, as the circumstances seemed to require. In most instances the suggestions were kindly received and in a large number were fully, or to a considerable extent, carried out.

Circulars containing and explaining the amended law of the January Session of the General Assembly of 1889, in relation to the methods of procedure and the statement of facts in the returns of deaths, were written and sent to all the undertakers and town clerks in the State and to three hundred physicians, in such forms and with such text as were particularly applicable to the occupation and duties of each class.

The continued supply of other blanks to town and city clerks for monthly and annual returns of deaths, and of births and marriages ; blanks for account of improvements of a sanitary character in the towns and new sanitary ordinances, had been promptly attended to ; also those to physicians for monthly report of prevalent diseases, had been distributed monthly, and for physicians' returns of cause of death to town and city clerks, and for annual general returns ; also to clergymen the blank certificates of marriage ; and to undertakers the blanks for returns of death to town and city clerks, and blanks for undertaker's notice to physicians ; also to health officers for annual returns of duties attended to and work accomplished.

Other circulars had been written and distributed to various town officials and other parties, having duties under the laws in relation to public health and the vital statistics of the State, reminding them of those duties, suggesting methods of performance and urging their prompt discharge.

Distribution was made, when occasion called therefor, of the tracts for the " Prevention of Typhoid Fever " and " Prevention of Scarlet Fever," the " Manual " prepared for the use of health officers, the " Nomenclature " of diseases for the use of physicians, and the posters, " Treatment of the Drowned," when called for. In some of

the public schools, the rules of the latter are committed to memory by the senior class and recitations thereof given every week.

The 36th report on the vital statistics of the State had been prepared and would be issued from the press in a short time. It will be a volume of about 220 pages, will contain about 300,000 letters and 850,000 figures, requiring the use of about 1,500,000 figures in the preparation of the copy for the printer, or more than 5,000 figures a day for every working day in the year.

The publication of the *Monthly Bulletin* had been continued, for which the Secretary had written 94 notes, notices and articles, long and short; had prepared 12 summaries of deaths, with sex, parentage and ages; 24 pages of causes of deaths and number, with comments and percentages; and 24 pages of meteorological observations and summaries. Supervision was also given to printing, correcting proofs, addressing, wrapping, mailing and other methods of distribution of copies. The *Monthly* now reaches over 1,000 of the teachers in the public schools of the State.

There were 1,268 letters written by the Secretary during the year, about 150 of which were to parties in different States and countries, in reply to inquiries for various kinds of information.

The number of blanks necessarily sent out for returns and reports from different officials and professions, and at different times during the year, for purposes within the province and duties of the Board, exceeded 20,000.

The report upon "Tuberculosis among the neat-cattle in the State," and the preparation of the eleventh report of the Board, comprising 177 pages, including Tuberculosis, were among the duties and work of the Secretary during the year.

In the Cattle Commission department, the time of the Secretary had been occupied in the whole or in part of 168 different days during the year, in the investigation of cases of contagious or infectious diseases of horses, cattle and swine, or of animals suspected of having such diseases.

One hundred and fifty-six investigations, comprising 114 horses, were made because of suspected glanders or farcy. Some were isolated on suspicion and visited as occasion required, until confirmatory symptoms of glanders were developed, or otherwise were discharged. Of the 114 horses, 78 proved to be affected with the disease and were destroyed.

The Secretary had personally inspected 1,424 horses during the year, animals employed in nearly all the varied kinds of work.

Tuberculosis had been found in several herds of cows, and advice had been given in regard to the disposal of evidently infected animals and of those that had been exposed.

Three outbreaks only of suspected contagious diseases of swine were investigated during the year. In no one of these was contagiousness confirmed.

The oversight of the observing and detecting agencies of the Cattle Commission in the different towns in the State, had been under close supervision and frequent calls for reports. A record was shown, with the date, location, name of owner of the animal, disease investigated and disposal of each of the animals during the year. The value of the horses and cattle in the State exceeds \$5,000,000.

After brief discussion of some sanitary legislation the Board adjourned *sine die*.

At the second quarterly meeting, held Thursday, April 17th, the various communications received and conferences held by the Secretary were variously considered and opinions expressed, after which the Secretary gave in outline an account in brief of other work during the preceding quarter.

A history of the bill which had been drafted by the Secretary and introduced in the General Assembly, for the purpose of an act, which was designed to greatly restrict or suppress the enormous sales of adulterated materials used in the preparation of human food, was given, including the hearing thereon and the failure of making a report by the committee of reference.

The bill was largely discussed, its probable efficacy considered, and its provisions approved.

The *Monthly Bulletin* had been regularly issued with the usual presentation of the general health of the State, the mortality and meteorological statistics, and varied sanitary articles.

Circulars, blanks, and notices to the various persons in occupations in the line of the work of the Secretary, and from whom returns, reports or correspondence was required by law or needful, had been promptly forwarded so that no break need occur in the performance of duties of those parties.

Three hundred and sixteen written communications had been forwarded as a part of the work of the office.

In the Cattle Commission department the Secretary had personally inspected 315 horses, had made 58 special investigations, and 35 horses had been found glandered and destroyed.

The Secretary was appointed a delegate to the Conference of State and Provincial Boards of Health, to be held in Nashville, Tenn., May 23-25.

Further discussion occurred in regard to the sale of adulterated milk and other questions of hygiene and general sanitation, after which the Board adjourned *sine die*.

The third quarterly and twelfth annual meeting of the Board was held on Thursday, July 3rd.

At this meeting, Dr. Peter Curley, of Newport, the new member for Newport County, was present and courteously received.

After the usual routine of business matters was transacted, the Secretary gave a general outline of the work accomplished during the year ending June 30th, 1890, and also separately, that of the preceding quarter of the year.

Various questions of a sanitary character were discussed at considerable length, especially that of the adulteration of articles used in the preparation of food and drinks.

A motion that the regular quarterly meetings of the Board be held on the first Thursday of the months of January, April, July and October, was passed.

The following resolutions were passed unanimously :

WHEREAS, By limitation of term of service, Dr. Henry E. Turner, of Newport, has ceased to be a member of this Board ; therefore

Resolved, That the Board hereby express sincere and deep regret on account of the retirement of Dr. Turner.

Resolved, That the sincere thanks of his associates are due for his uniform courtesy, impartiality, dignity and judicious deliberation, during the entire period of eight years' service as Chairman of the Board.

Resolved, That the members of the Board follow Dr. Turner in his retirement with sentiments of deep respect and high personal regard.

The Secretary reported that inspections had been made by himself personally of 180 horses, 27 of which were for suspected glanders or farcy, and 17 were found having the disease and were destroyed.

The distribution of blanks and the publications of the Board had been attended to promptly and to an increased number of applicants.

Without dissent, leave of absence for ten weeks was given the Secretary, that he might attend the annual meeting of the British Medical Association at Birmingham, in England, and the triennial meeting of the International Medical Congress at Berlin, in Germany,

(of which he was a member-elect) and also visit other countries and cities for the purpose of investigating, as time might allow, systems of sewage disposal and other procedures of sanitary administration.

The persons proposed for appointment, to act in the place of the Secretary during his absence, were approved.

It was voted that cases of nuisances reported to the office during the absence of the Secretary should be referred to the members of the Board in each county in which such nuisance should be located, and that such members should give such attention as the circumstances seemed to demand.

It was also voted, that each of the members of the Board should make such sanitary examinations of the hotels in their own counties respectively, as were called for according to law.

The Board then proceeded to elect the general officers for the ensuing year, with the following result :

For Chairman—Albert G. Sprague, M. D., River Point.

For Secretary—Charles H. Fisher, M. D., Providence.

The fourth quarterly meeting was held on Thursday, Oct. 16th, adjourned from Oct. 2nd.

At this meeting, a letter from Dr. H. E. Turner, of Newport, the recently retired member of the Board, was read, expressing his appreciation of the uniform courtesy extended him by all the members of the Board during the whole period of eight years of association, and of his warm personal regard for each and every person who was a member during that time.

After the transaction of the routine business an account was given of the proceedings of the persons acting in the different departments of the Board, in the place of the Secretary during his absence. Complaints of nuisances had been much less frequent than in previous years. The current office duties, the correspondence, the monthly collection, collation and record of vital statistics, the distribution of circulars and blanks, and information in regard to records and official duties, had been well attended to.

Progress, to the extent of 12 tables, comprising 80 pages, in print, of the preparation of the 38th Report upon Registration of Births, Marriages and Deaths in Rhode Island in 1889, was reported.

The publication of the *Monthly Bulletin*, after the usual omissions during July and August, had been resumed. The issue of the September number had been delayed, partly by the Secretary's absence,

and partly by the break-up in the State Printer's establishment during the week of the cotton centennial.

In the Cattle Commission department the Secretary reported that during the three months ending Sept. 30, 1890, 52 horses, among a larger number of suspected cases, were found with advanced glanders and were destroyed. The names of the owners, places where kept and dates of finding or condemning were on record as usual and shown.

The Secretary said that the matter of glanders and farcy in horses demanded serious attention. There had been an increase in the number of cases from the beginning of the year. The agencies for detection had been multiplied, and unusual diligence exercised, with the result of the discovery of more than 100 cases during the previous nine months. Notwithstanding the discovery and destruction of so many cases, he thought that the disease was still quite largely prevalent, especially in Providence county, and not only in the latent and undeveloped form, but also where the disease had advanced to a degree that would scarcely fail to excite suspicion. He said there was evidently a disposition on the part of many owners of horses, and sometimes at a hint from a veterinary, without the name of the disease being given, to conceal animals showing symptoms of the disease until opportunity occurred for sale to some unsuspecting individual at an apparently low price, and the new owner, quite as unscrupulous, finding himself a victim, and from the terms of the bargain made, unable to obtain any redress from the original owner, and suspecting the character of the disease and its incurability, would realize as much as possible by selling again in the same way, and the horse in the course of from three to five weeks, until discovered by some agent of the Board, might pass through as many as four or five owners' hands, and at a constantly diminishing price. During this time other horses would be exposed to infection and the disease be further spread.

In such cases it has been impossible to prove that any one of the owners *knew* or even suspected that the horses they had sold were glandered, and they were thus enabled to escape the penalty. And then again it was quite evident that there were unprincipled dealers in horses of a cheap grade, who make it a business in part to obtain horses suspected of having glanders and other incurable diseases, for the purpose of "fixing them up" and trading off in a clandestine way and representing them as having only slight ailments of a temporary character.

The occurrence of a considerable proportion of the cases in horses

that were of recent introduction in the State, is evidence of the rather frequent and continuous importation of the disease from other localities. These cases, especially in young horses from Canada and the West, bring the disease with them in a dormant state and do not show any signs of it whatever when brought into the State. He alluded to the danger of infection from hitching posts and other hitching places, and the rims of watering troughs, rather than from the water in them, as the virus in the discharges from the nose upon any firm surface was active under ordinary exposure for a considerable length of time after being deposited thereon. He suggested additional measures for the restriction of the disease.

Considerable discussion was given to the subject of the adulteration of drugs and of articles of food, and of the purity of public water supplies.

It was voted that the Secretary be authorized to take such measures and to proceed in such manner in regard to the restriction of glanders in horses, and in relation to the detection of adulterations of drugs and of articles of food, and also in relation to the analysis of public water supplies, as in his judgment seem to be most urgently demanded.

The question of consumption and its communicability was also considered, and further discussion was postponed by agreement to be taken up at a subsequent meeting, and the Board then adjourned.

GENERAL WORK OF THE BOARD.

It has been the purpose at all the meetings of the Board to consider in what way the sanitary interests of the citizens of the State could be best subserved, with the means at command and with such authority as the Board could legally exercise.

In pursuance of such objects, investigations into the causes of disease have been ordered and made when circumstances seemed to call for such action, either by the Secretary as executive officer or by an expert in some special line of inquiry.

Such proceedings have been a part of the work of the Secretary in regard to nuisances, public and private, when such were believed to be detrimental to the public health, to the result of the ultimate removal or abatement of such unsanitary conditions; and in regard to the quality of the water supply of villages and shore resorts; and to the proper drainage of compact collections of dwellings, work-

shops, etc., as to sink, laundry and other waste water ; to the proper disposal, in such compact localities, of the house refuse and excreta of whatever kind liable to putrefactive decomposition ; to the measures needful to be taken to prevent in the transportation or by public funerals, the transmission or spread of contagious diseases, from exposure to the emanation from the dead bodies of such as have died from such diseases ; to the distribution of tracts and circulars in localities where contagious diseases break out, urging isolation of the sick and other methods of restriction of the disease ; to the collection of vital statistics ; to the adulterations of articles entering into the composition of food and drink ; to the means needful in the discharge of the duties imposed by the Public Statutes in the Cattle Commission department ; and such other questions, having sanitary relations, as from time to time seemed to require attention.

OFFICE WORK.

Obviously the limits of a general report of the Board would preclude the publication of anything more than a mere outline of the routine and special work in the office.

Briefly, as heretofore observed, the correspondence is continuous and large, the personal conferences in relation to sanitary questions and other matters within the executive or advisory jurisdiction of the Board, are frequent and many times prolonged or repeated, especially in relation to the contagious and infectious diseases of animals, and in relation to the nuisance laws and the rights of individuals under those laws ; notice is given of all changes in the laws having relation to the duties of physicians, town clerks and undertakers, which occur nearly every year, and which are written out and explained, as they may have application to either of the occupations, with blanks for each, changed to meet the requirements of law ; the prompt and continued forwarding of a supply of other blanks as needed to town and city clerks for monthly and annual returns of deaths, and of births and marriages ; blanks for an account of improvements of a sanitary character in the towns and of new sanitary ordinances ; also, to physicians for monthly report of prevalent diseases, distributed monthly, and for physicians' returns of cause of death to town and city clerks, and for annual general returns ; also to clergymen the blank certificates of marriage ; and to undertakers the blanks for returns of death to town and city clerks, and blanks for undertaker's notice to phy-

sicians ; also, to health officers for annual returns of duties attended to and work accomplished.

Other circulars are written and distributed to various town officials and other parties, having duties under the laws in relation to public health and the vital statistics of the State, reminding them of those duties, suggesting methods of performance and urging their prompt discharge.

Distribution is made, when occasion requires, of the tracts for the "Prevention of Typhoid Fever" and "Prevention of Scarlet Fever," the "Manual" prepared for the use of health officers, the "Nomenclature" of diseases for the use of physicians, and the posters, "Treatment of the Drowned," when called for.

A record of the investigations of cases of contagious diseases of domestic animals, the date, the name of the owner, the location, the characteristics of the disease and other notes. (See Report of the Cattle Commission department.)

Twelve hundred and fourteen letters were written by the Secretary during the year, not a few of which were to prominent public men and government officials in European countries, making inquiries in regard to sanitary measures adopted and results of the same, and asking for data in detail regarding important facts in the various relations of vital statistics.

THE "MONTHLY BULLETIN."

The publication of the *Monthly Bulletin* has been continued through the year, for which the Secretary has written 88 articles, long and short ; has prepared 12 summaries of deaths, with sex, parentage and ages ; 24 pages of causes of deaths and number, with comments and percentages ; and 24 pages of meteorological observations and summaries. Supervision is also given to printing, correcting proofs, addressing, wrapping, mailing and other methods of distribution of copies.

It has been regularly mailed or otherwise placed in the hands of 1056 of the teachers in the public schools of the State. The index, which would take up too much space in this report will be sent to any party making application therefor.

HEALTH OF THE STATE, 1890.

In the pages following, an account will be found of the prevalence of diseases of the various kinds and forms as they occurred in the different towns during 1890. The State was unusually exempt from epidemics of the contagious or infectious diseases during the year.

Three only of ordinary occurrence, that is diphtheria, measles and typhoid fever, had such prevalence. Diphtheria was epidemic in a part of the town of Smithfield, and was rather largely prevalent in two other towns for a short period.

Measles had epidemic prevalence in Bristol, East Providence, Warwick, Hopkinton, North Kingstown and Westerly.

Typhoid fever had epidemic prevalence in Barrillville only.

If the influenza or "la grippe" be included with the contagious and infectious diseases, and it is infectious surely, though doubtful if communicated from one person to another by contact, then it should be said that every town and even every hamlet in the State was visited by an epidemic disease.

EPIDEMIC INFLUENZA (LA GRIPPE).

Commencing about the 20th of December, 1889, and continuing through January and a considerable part of February, 1890, there occurred one of the most remarkable epidemics of modern times, considering the number of its victims, the rapidity of transit, and the extent of territory over which it traversed. Originating in Russia, it spread over the larger part of Europe between the forty-second and sixtieth degrees of latitude, and covering the entire territory in North America between the thirty-second and fiftieth degrees of latitude. In this connection a very brief account only will be admissible.

In Rhode Island not less than thirty-three per cent. of the entire population was, sooner or later, during the winter of 1889 and 1890, attacked with the disease.

Usually there were few, if any, premonitory symptoms foretelling the onset of the malady, it being ushered in suddenly with chills, followed by headache, pains in the limbs and back, more or less fever, dryness and heat of the linings of the nostrils and throat, and general nervous disturbance with a sense of weariness and dejection or depression of spirits, hardly to be accounted for by the amount or severity of the other symptoms.

Other and numerous derangements of function were attendant, as loss of appetite, nausea, indigestion, catarrh of the nostrils and respiratory passages, and not infrequently of the alimentary canal. The acute attack lasted in a majority of instances from three to five days and was followed by cough and expectoration for an indefinite length of time, lack of energy, muscular weakness, and other functional or organic derangements or positive lesions and impairment of tissue.

The tendency was greatest toward inflammation of the bronchial and pneumonic tissues. Bronchitis and pneumonia were frequent sequelæ and in many instances with fatal results.

In a very considerable proportion of the cases, convalescence was very tardy, and complete restoration to health in many instances was so long delayed and through so much general *malaise*, that the results seemed to bear but little relation to the conditions during the first week of sickness.

The number of cases of death reported during the first three months of the year, as having been caused by the influenza primarily, and secondarily by inflammation or congestion of the respiratory organs, were as follows :

JANUARY.	FEBRUARY.	MARCH.
<i>Pneumonia.</i>	<i>Pneumonia.</i>	<i>Pneumonia.</i>
Whole number..... 134	Whole number..... 63	Whole number.. ... 70
Following influenza 76	Following influenza. 22	Following influenza. 9
<i>Bronchitis.</i>	<i>Bronchitis.</i>	<i>Bronchitis.</i>
Whole number..... 42	Whole number.. .. 21	Whole number..... 36
Following influenza. 22	Following influenza 7	Following influenza. 7

It will be seen by the above that the mortality from pneumonia and bronchitis in January, 1890, was caused primarily in considerably more than one-half of the cases by the influenza, and during the first quarter of the year, by about thirty-six per cent. of the cases.

This epidemic influenza of the winter of 1889 and 1890, differed from the sporadic and sometimes epidemic influenza of other years ; first, by the intensity of functional disturbance ; and second, by the tendency to dangerous organic complications.

There is also a difference of opinion among medical men as to its contagiousness. This difference I think is more in words than in conception or judgment. No one questions the fact that it comes

from a living specific agent, or poisonous substances, or particles in the atmosphere which is, or are, too infinitesimal and volatile to be discovered by the naked eye, and, as yet, too subtle and elusive to be caught for microscopic or biological investigation. It is evident that it may be transported by persons, or by clothing or merchandise, or in currents of the air. It would seem that it must have vitality, and be capable of exceedingly rapid propagation, or the production of multiple fermentative or putrefactive products.

The question of infection is not doubted. But is the poison generated in the atmosphere, and only where the free atmospheric air is present, or may it be generated in animal bodies, and exhaled in the breath, or discharged in the secretions, or in the effluvia of human bodies, and so communicated from one person to another by contact and thus constitute contagion proper?

The principal work of the Board will be presented in larger detail, though necessarily epitomized, in the report of the Secretary, which will be found in the following pages.

Respectfully submitted for the Board.

CHAS. H. FISHER,
Secretary.





SECRETARY'S REPORT.

HEALTH IN THE TOWNS.

1890.



HEALTH OF TOWNS.

PHYSICIANS' REPORTS.

In order to present, from year to year, a connected history of the comparative prevalence of zymotic and other important diseases, and especially when of epidemic occurrence, it has seemed necessary that there should be given an account of the diseases occurring in the different towns during each year, that is, as to amount of general sickness, the kinds and typé of zymotic and other acute diseases that have had prevalence, the relative number compared with other years, general severity, season of occurrence, and locality of special prevalence; and also other facts in relation to the sanitary sentiment of the communities, and suspected sources of ill health.

Therefore, as in previous years, the plan of soliciting from the regular medical correspondents of the Board, and other physicians, a report at the commencement of each year, covering, in a general way, the whole of the preceding year, in relation to the amount of sickness of all kinds, the prevalence of particular diseases, and the sanitary conditions and movements in their respective localities, has been continued, and the circular presented on the following page sent therefor :

OFFICE OF SECRETARY OF THE STATE BOARD OF HEALTH.

PROVIDENCE, January 1, 1891.

The Secretary of the State Board of Health desires to obtain from respectable physicians, actively engaged in the practice of their profession, in every section of the State, an Annual Report covering the whole twelve months preceding the above date.

The following questions will indicate the information sought, and the general plan of such report; but correspondents need not be confined to precise replies to the questions presented, all the freedom being allowable of such modifications and additions as the circumstances or peculiarities of each locality may seem to warrant.

These annual reports are desired for the purpose of presenting the status of the public health, and the sanitary conditions and sentiment existing in the different sections of the State, during the year 1890, in the Thirteenth Annual Report of the State Board of Health.

They should be returned to the Secretary of the Board by the second week in February.

Any additional postage stamps needed to cover postage on more extended consideration of the topics suggested, or any other topic having relation to the public health will be immediately refunded on the receipt of papers.

QUESTIONS.

1. Name of physician.
2. Name of town and circuit.
3. Taking sickness of all kinds, has there been more or less than usual in your circuit the past year? How much?
4. Which of the following zymotic diseases have prevailed in your circuit during the past year? Please state when sporadic and when epidemic, whether mild, average or severe, and in what months they occurred, and in what localities.

	Sporadic or Epidemic.	Degree of Severity.	Months.	Locality.
a. Cholera Infantum.				
b. Croup.				
c. Diarrhœa and Dysentery.				
d. Diphtheria.				
e. Fever, Malarial.				
f. Fever, Typhoid.				
g. Measles.				
h. Scarlatina.				
i. Small Pox.				
j. Whooping Cough.				
5. Any other zymotic disease epidemic.				

OTHER DISEASES NOT SPECIALLY ZYMOTIC.

Also, please state what degree of prevalence, whether large, average or small, and if above average, in what months was the large occurrence of the following named diseases. State degree of prevalence, and time of occurrence, under the headings following:

	Degree of PREVALENCE.	MONTHS.
k. Brain, Inflammation and Congestion of.		
l. Bronchitis, Acute.		

- | Degree of
PREVALENCE. | MONTHS. |
|--------------------------|---------|
|--------------------------|---------|
- m. Meningitis, Cerebro Spinal, Sporadic.
- n. Pneumonia.
- o. Rheumatism.
- p. Stomach, Acute Diseases of.
6. What diseases, not classed as zymotics, have had unusually large prevalence during the past year?
7. What diseases have been attended with unusual fatality?
8. Have any circumstances occurred within your observation or knowledge that seemed to indicate that Scarlet Fever, Diphtheria, or Typhoid Fever had been taken or communicated from one person to another? A full history of known facts, in detail, should be given. Such history need not be confined to any particular year. State on separate sheet.
9. Has there been, in your opinion, any advance in public sentiment, or views of individuals, in your circuit, in regard to the importance of sanitary surroundings, or any increased interest in means of preventing diseases? State what reasons for belief.

Very respectfully,

CHAS. H. FISHER,

Sec. of State Board of Health.

The following extract from the Public Statutes, in relation to the duties of town and local boards of health, and practicing physicians, was also appended :

PUBLIC STATUTES, CHAPTER 83.

SEC. 6. The secretary of the said board shall make inquiry, from time to time, of the clerks of town and local boards of health, and PRACTICING PHYSICIANS, in relation to the prevalence of any disease, or knowledge of any known or generally believed source of disease, or causes of general ill health, and also in relation to the proceedings of the said boards of health, in respect to acts for the promotion and protection of the public health, and also in relation to diseases among domestic animals in their several towns and localities respectively, and the said clerks of town and local boards of health, and the said PRACTICING PHYSICIANS shall give such information, in reply to said inquiries, of such facts and circumstances as shall have come to their knowledge.

REPLIES.

The reports, on the following pages, received from local correspondents and others of the medical profession in the several cities, towns and villages of the State, will give a good representation of the general status of the public health during the year 1890, as to the presence or absence of epidemics or endemics, or large prevalence of important or unusual diseases in the several locations, the sanitary conditions and improvements, if any, in their several circuits, and other suggestions in response to the preceding circular :

ANNUAL REPORTS OF MEDICAL CORRESPONDENTS.

BRISTOL COUNTY.

2. BRISTOL.

3. With sickness of all kinds there has been about the usual amount in this circuit during the past year.

4. Diseases have prevailed as follows:

Cholera Infantum. Sporadic. Average. Summer. Compact part of town.

Diarrhœa and Dysentery. Sporadic. Above average. Summer and Fall. Compact part of town.

Fever, Typhoid. Sporadic. Mild. Fall. Compact part of town.

Measles. Epidemic. Average type. First three months. General.

Scarlatina. Sporadic. Mild. Fall. General.

Whooping Cough. Considerable number. Spring.

5. No zymotic disease fairly epidemic except measles.

Brain, Inflammation and Congestion of. Small number. Fall.

Bronchitis, Acute. Average amount. Spring and fall.

Pneumonia. Average number. Winter and spring.

Rheumatism. Full average. Winter and spring.

6. No diseases have had unusually large prevalence during the year except as stated.

7. None attended with unusual fatality.

8. Nothing new in regard to communicability of Scarlet Fever, Diphtheria, or Typhoid Fever.

9. Not much advance in public sentiment in this town in regard to the importance of sanitary surroundings, or interest in means of preventing diseases?

10. Lack of efficient sewerage is, however, believed to be a source of ill health in this town.

H. S. SWAN, M. D.

2. BRISTOL.

3. Taking sickness of all kinds the general amount has been about the usual average during the past year.

4. The following zymotic diseases have prevailed during the year:

Cholera Infantum. Sporadic. Average. July and August.

Diarrhœa and Dysentery. Almost epidemic. Mild. July and August.

Fever, Typhoid. Sporadic. Mild. June and September.

Measles. Epidemic. Severe from the latter part of February to April.

Scarlatina. Sporadic. Mild. May and September.

Whooping Cough. Epidemic. Severe. February to June.

5. No other zymotic disease epidemic.

Diseases not zymotic:

Brain, Inflammation and Congestion of. None.

Bronchitis, Acute. Average amount. March, November and December.

Pneumonia. Average amount. March and November.

Stomach, Acute diseases of. Since November have had several cases with symptoms of La Grippe, and terminating with severe stomach trouble.

6. No diseases not zymotic have had unusually large prevalence during the year.

7. No diseases have been attended with unusual fatality.

9. I think there is some advance in public sentiment and views of individuals in regard to the means of preventing diseases. Since our epidemic of Typhoid two years ago much more interest is taken in regard to water closets and general surroundings, and our streets are kept in better condition.

D. J. NEYLAN, M. D.

2. WARREN AND BARRINGTON.

3. With sickness of all kinds the general amount has been about as usual during the past year. Less during the last eight months. More during the first four months,—one-half more.

4. The following zymotic diseases have prevailed during the year:

Cholera Infantum. Sporadic. Mild. Summer.

Croup. Sporadic. Small amount. Mild. Autumn and winter.

Diarrhœa and Dysentery. Sporadic. Usual amount. Mild. Summer.

Diphtheria. Sporadic. Mild. Autumn.

Fever, Malarial. Sporadic. Mild. Autumn.

Fever, Typhoid. Sporadic. Mild. Autumn.

Measles. None.

Scarlatina. Sporadic. Mild. Autumn. Suburbs, winter.

Whooping Cough. Sporadic. Mild. Autumn.

5. No zymotic disease epidemic except influenza. General. Severe. Winter.

Other diseases:

Brain, Inflammation and Congestion of. None.

Bronchitis, Acute. Average prevalence. Winter and spring.

Pneumonia. Average. Winter and spring.

Rheumatism. Average. Winter and spring.

Stomach, Acute diseases of. Average number. No particular season.

6. No other diseases had unusually large prevalence.

7. No unusual fatality.

9. A moderate advance in public sentiment in regard to the importance of sanitary surroundings.

10. A more careful arrangement of sewer connections and the depositing of sewer products at more remote points in the river channels.

G. L. CHURCH, M. D.

2. BARRINGTON AND EAST PROVIDENCE.

3. Taking sickness of all kinds the general amount has been rather less than usual in this circuit during the past year.

4. The following zymotic diseases have prevailed during the year.

Cholera Infantum. None.

Croup. Sporadic. Average. Winter months.

Diarrhœa and Dysentery. Sporadic. Average. July, August, September.

Diphtheria. None.

Fever, Malarial. More or less the year round; not often of a severe type.

Fever, Typhoid. None.

Measles. Sporadic. Average. November, December.

Scarlatina. None.

Whooping Cough. None.

5. No zymotic disease epidemic except La Grippe in January.

Diseases not zymotic :

Brain, Inflammation and Congestion of. None.

Bronchitis, Acute. Large amount. January, February, March.

Pneumonia. Rather above average. January, February, March.

Rheumatism. Average amount. January to April.

Stomach, Acute diseases of. None.

6. No diseases have had unusually large prevalence excepting only the epidemic Influenza of national reputation.

7. No unusual fatality.

10. Do not know of any generally believed source of ill-health in this circuit.

A. C. PEIRCE, M. D.

KENT COUNTY

2. RIVER POINT and vicinity, WARWICK and surrounding towns.

3. Taking sickness of all kinds the general amount, in connection with La Grippe, has been 20 per cent. more than usual during the past year. Should judge that 75 per cent. of the people in the Pawtuxet valley suffered from it. No fatal cases from a direct attack, but quite a number from the effects of it.

4. The following zymotic diseases have prevailed during the past year:

Cholera Infantum. Sporadic. July, August, September.

Croup. Average number. Fall and winter.

Diarrhœa and Dysentery. No unusual amount. Summer and fall.

Diphtheria. None.

Fever, Malarial. Very light. No special season.

Fever Typhoid. Few cases. Mild. In fall.

Measles. Epidemic. Average severity. Summer.

Scarlatina. Light prevalence.

Whooping Cough. Few cases. Spring.

5. No zymotic disease epidemic except Measles and Influenza.

Diseases not zymotic:

Bronchitis, Acute. Average number. Spring, fall and winter.

Pneumonia. Usual prevalence. Fall and winter.

Rheumatism. Cases all through the year.

6. The diseases that had unusually large prevalence during the past year were Influenza, Measles and Tonsillitis.

7. No diseases were attended with unusual fatality. Varicella. Epidemic December, and very prevalent in this vicinity at present time.

9. There has been some advance in public sentiment in regard to the importance of sanitary surroundings, and means of preventing diseases. There have been a large number of complaints of nuisances, and all have been satisfactorily attended to without much trouble.

10. No known or generally believed source of ill-health in my circuit.

A. G. SPRAGUE, M. D.

2. WARWICK, ARCTIC, RIVER POINT and vicinity.

3. With sickness of all kinds, the general amount during the past year, leaving aside the months in which the epidemic of La Grippe prevailed, has been about as usual.

Cholera Infantum. The usual amount in the summer months.

Croup. Rather mild in winter.

Diarrhœa. Usual amount the year around, and mild. Dysentery. Sporadic and quite severe in September and October.

Diphtheria. Few sporadic cases. Mild.

Fever, Malarial. Malarial Fever seems to be on the decrease in my circuit.

Fever, Typhoid. Sporadic cases last fall and of very mild form.

Measles. Above average amount all around.

Scarlatina. Few cases and mild.

Small Pox. None.

Whooping Cough. Average Mild epidemic in Natick last spring.

5. No other zymotic diseases have had any prevalence more than the average.

Brain, Inflammation and Congestion of. Mild. Sporadic at all times.

Bronchitis, Acute. Average. In the spring time.

Pneumonia. Large prevalence last spring, and severe.

Rheumatism. Usual amount.

Stomach, Acute diseases of. Average in warm months of the year.

6. No diseases have had unusually large prevalence except La Grippe during January and February.

7. No diseases have been attended with unusual fatality.

9. There has not been, in my opinion, much advance in public sentiment in regard to the importance of sanitary surroundings, except a few individual instances, and sanitary surroundings of River Point cotton mills village have received special attention by the owners and have been greatly improved.

M. J. E. LEGRIS, M. D.

2. COVENTRY.

3. Taking sickness of all kinds, the general amount has been rather less than usual during the past year.

4. The following zymotic diseases have prevailed during the year:

Cholera Infantum. Sporadic. Mild. July, August. Coventry.

Croup. Sporadic. Mild. January, February. Coventry.

Diarrhœa and Dysentery. Sporadic. Severe. November, December. Anthony.

Diphtheria. Sporadic. Mild. November, December. Coventry.

Fever, Malarial. Small number. All the year. Coventry.

Fever, Typhoid. None.

Measles. None.

Scarlatina. None.

Small Pox. None.

Whooping Cough. None.

5. La Grippe. Epidemic. Severe. January, February. Everywhere.

Diseases not zymotic:

Brain, Inflammation and Congestion of. None.

Bronchitis, Acute. None.

Pneumonia. The usual number of cases. All the year.

Rheumatism. Large amount. All the year.

Stomach, Acute diseases of. None.

6. No diseases not zymotic had unusually large prevalence during the year.

7. None attended with unusual fatality.

9. Not much advance in public sentiment or views of individuals in regard to the importance of sanitary surroundings.

10. No generally believed source of ill-health.

J. WINSOR, M. D.

2. COVENTRY and parts of all adjoining towns.

3. Taking sickness of all kinds the general amount was about an average during the past year. Perhaps fewer malignant diseases.

4. The following zymotic diseases have prevailed during the year:

Cholera Infantum. Sporadic. Average. Summer. Coventry Centre.

Croup. A few cases of sporadic. Coventry Centre.

Diarrhœa and Dysentery. Moderate prevalence. Severe in August and September. Mild in November.

Diphtheria. Moderate prevalence. Mild in May and October.

Fever, Malarial. No genuine cases.

Fever, Typhoid. No genuine Typhoid, but simple continued fevers. Quite numerous in Autumn months.

Measles. Very prevalent and severe. Spring months in Washington.

Scarlatina. Very few mild cases in November and December.

Small Pox. None.

Whooping Cough. Few mild and protracted cases throughout the summer.

5. No zymotic disease epidemic, to my knowledge, except La Grippe in January and February.

Diseases not zymotic:

Brain, Inflammation and Congestion of. Only three cases. Very severe. February and March.

Bronchitis, Acute. Quite prevalent and severe. April, May and December.

Pneumonia. Few mild cases. Spring and late in fall.

Rheumatism. An occasional acute case throughout the year.

Stomach, Acute diseases of. Few cases during summer.

6. Heart Diseases, resulting from Rheumatism, had unusually large prevalence during the past year.

7. Measles were attended with unusual fatality.

9. Some home improvements (individual) in Coventry, in drainage, sinks, etc.

10. It is believed to be unusually healthful in our town. That "The

Pawtuxet River is somewhat contaminated from refuse matter (within our borders)" is claimed by some.

F. B. SMITH, M. D.

2. COVENTRY, WEST GREENWICH and FOSTER.

3. Taking sickness of all kinds, the general amount has been during the past year, about the same as usual.

4. The following zymotic diseases have prevailed during the year.

Cholera Infantum. None.

Croup. None.

Diarrhœa and Dysentery. A few cases of Diarrhœa, Sporadic, and Dysentery.

Diphtheria. None.

Fever, Malarial. None.

Fever, Typhoid. Has not been prevalent. Sporadic case. Very severe. August.

Measles. None.

Scarlatina. None.

Whooping Cough. None.

5. No zymotic disease very prevalent, except La Grippe, in January.

Other diseases:

Brain, Inflammation and Congestion of. None.

Bronchitis, Acute. Large amount. January, February.

Pneumonia. Small amount. January.

Rheumatism. Small amount. July.

Stomach, Acute diseases of. None.

6. No diseases had unusually large prevalence.

7. No unusual fatality.

9. No advance in public sentiment or views of individuals noticed in regard to the importance of sanitary surroundings.

10. No known source of ill-health.

C. L. ORMSBEE, M. D.

NEWPORT COUNTY.

2. TIVERTON.

3. Taking sickness of all kinds, the general amount has been ten per cent. more than usual during the past year.

4. The following zymotic diseases have prevailed during the year.

Cholera Infantum. Sporadic. Severe. August. Between the bridges.

Croup. None.

Diarrhœa. Sporadic. Severe. July. Below the bridges.

Diphtheria. Sporadic. Severe. October, and November. Between the bridges.

Fever, Malarial. None.

Fever, Typhoid. None.

Measles. Sporadic. Severe. March.

Scarlatina. Severe. July. Narragansett.

Whooping Cough. Sporadic. Mild. May and October. Between the bridges.

5. No zymotic disease epidemic.

Other diseases :

Brain, Inflammation and Congestion of. Small amount. May.

Bronchitis, Acute. Small amount. October.

Pneumonia. Small amount. October.

Rheumatism. Small amount. November.

Stomach, Acute diseases of. Small number. November and December.

6. No diseases had unusually large prevalence.

8. Nothing new that seemed to indicate that Scarlet Fever, Diphtheria, or Typhoid Fever had been taken or communicated from one person to another.

9. Have seen no proof of any advance in public sentiment or views of individuals in regard to the importance of sanitary surroundings.

10. Do not know of any general source of ill-health.

C. H. YALE, M. D.

PROVIDENCE COUNTY.

2. CUMBERLAND, VALLEY FALLS, and towns adjoining.

3. Taking sickness of all kinds, there has been slightly less than usual during the past year.

4. The following zymotic diseases have prevailed during the year.

Cholera Infantum. Sporadic. Mild. September. Not confined to any particular place.

Croup. Only spasmodic.

Diarrhoea and Dysentery. Sporadic. Mild. Summer. Not confined to any particular place.

Diphtheria. Sporadic. Mild. April and November. Not confined to any particular place.

Fever, Malarial. Sporadic. Mild. April to December. Not confined to any particular place.

Fever, Typhoid. None.

Measles. None.

Scarlatina. Sporadic. Average. September.

Small Pox. None.

Whooping Cough. Sporadic. Mild. March and April. Not confined to any particular place.

5. Influenza. Epidemic. Average severity. January and February. Not confined to any particular place.

Diseases not zymotic:

Brain, Inflammation and Congestion of. None.

Bronchitis, Acute. Moderate amount. Spring and fall.

Pneumonia. Small number. March and November

Rheumatism. Moderate amount. April, September and October.

Stomach, Acute diseases of. None.

6. No other diseases had unusually large prevalence.

7. No unusual fatality.

8. As to circumstances that seemed to indicate that Scarlet Fever, Diphtheria, or Typhoid Fever had been taken or communicated from one person to another, I have observed nothing unusual during the year.

9. Not much evidence of advance in public sentiment or views of individuals in regard to the importance of sanitary surroundings, or increased interest in means of preventing diseases.

10. No known or generally believed source of ill-health.

G. B. HAINES, M. D.

2. GLOCESTER AND BURRILLVILLE.

3. With sickness of all kinds, the general amount has been more than usual in this circuit during the past year, by 20 per cent.

4. Zymotic diseases have prevailed during the year as follows:

Cholera Infantum. None.

Croup. Sporadic. Average severity. November and December. Chepachet Village.

Diarrhœa and Dysentery. Sporadic. Average severity. Summer.

Diphtheria. Sporadic. Mild. July. East part of Burrillville.

Fever, Malarial. None.

Fever, Typhoid. Epidemic. Severe. September, October, November. Mapleville and Oakland.

Measles. None.

Scarlatina. None.

Whooping Cough. None.

5. No other zymotic disease epidemic except La Grippe. First three or four months of year.

Other diseases.

Brain, Inflammation and Congestion of. None.

Bronchitis, Acute. Considerable. Colder months.

Pneumonia. Average amount. Winter and spring.

Rheumatism. Small amount.

Stomach, Acute diseases of. Small amount.

6. No other diseases had unusually large prevalence.

7. No unusual fatality.

8. In the Burrillville epidemic there were several families having a number of cases, but whether contracted one from another or all from the general cause seemed uncertain. The only causes which appeared were the overcrowding among the French and general filthiness all around including lack of proper drainage.

9. No advance noticed in public sentiment or views of individuals in regard to the importance of sanitary surroundings.

A. POTTER, M. D.

G. A. HARRIS, M. D.

2. EAST PROVIDENCE, mostly.

3. Taking sickness of all kinds, the general amount has been less than usual during the past year, except including La Grippe.

4. The following zymotic diseases have prevailed during the year:

Cholera Infantum. Sporadic. Mild. Summer. Watchemoket.

Croup. Sporadic. Average. Spring.

Diarrhœa and Dysentery. Sporadic. Mild. Warm months.

Diphtheria. Sporadic. Mild. Through year.

Fever, Malarial. Sporadic. Mild. Very little, and that due to bad drainage. Watchemoket.

Fever, Typhoid. Sporadic. Mild. August and September.

Measles. Epidemic. Average. February, March, April and May. East Providence.

Scarlatina. Sporadic. Mild.

Whooping Cough. Sporadic. Spring and early summer.

5. No other zymotic disease epidemic except La Grippe, which was very prevalent. No fatality. January to March. Watchemoket. It extended into the country after subsiding in the village. It proved severe, with many complications, when not early treated.

Other diseases not zymotic:

Brain, Inflammation and Congestion of. Few cases.

Bronchitis, Acute. Large amount. January to April, and November and December.

Pneumonia. Average amount. During La Grippe, and December, 1890.

Rheumatism. Average amount. Spring months and December.

Stomach, Acute diseases of. Few cases.

Cerebro Spinal Meningitis. Several cases. June. One fatal.

7. No unusual fatality.

9. Very slight if any advance in public sentiment in regard to the importance of sanitary surroundings. Much sickness is caused by filthy cesspools with no traps, especially in tenement houses. The State should interfere, as it proves unprofitable for local officers, especially for physicians, to make suggestions when the interest of the landlord is concerned. The public are not informed as to its importance.

S. HUNT, M. D.

2. FOSTER, SCITUATE and vicinity.

3. Taking sickness of all kinds the general amount has been a quarter more than usual during the past year.

4. The following zymotic diseases have prevailed during the year:

Cholera Infantum. Sporadic. Severe. September to December. Villages.
Croup. None.

Diarrhoea and Dysentery. Sporadic. Mild. September to December. Scattered.

Diphtheria. Sporadic. Average severity. December. Villages.

Fever, Malarial. Sporadic cases. Average severity. September to December. Scattered.

Fever, Typhoid. Sporadic. Average severity. September to December. Scattered.

Measles. None.

Scarlatina. None.

Whooping Cough. Sporadic. Severe. April and May. Villages.

5. No zymotic epidemic, except La Grippe in January.

Other diseases not zymotic:

Bronchitis, Acute. Average prevalence. February, March, November and December.

Pneumonia. Large prevalence. November and December.

Rheumatism. Small prevalence. February, March and December.

Stomach, Acute diseases of. Average prevalence. All months.

6. No other diseases had unusually large prevalence.

7. No unusual fatality.

8. Nothing unusual that seemed to indicate that Scarlet Fever, Diphtheria, or Typhoid Fever had been communicated from one person to another.

9. Have not seen evidence of any advance in public sentiment or views of individuals in regard to the importance of sanitary surroundings.

10. No generally believed source of ill-health in my circuit.

H. ARNOLD, M. D.

2. MANVILLE, TOWNS LINCOLN AND CUMBERLAND.

3. Taking sickness of all kinds the general amount has been fifteen per cent. more than usual in this circuit during the past year, owing to La Grippe.

4. The following zymotic diseases have prevailed during the year:

Cholera Infantum. Sporadic. Severe. July and August. Manville.

Croup. None.

Diarrhœa and Dysentery. Sporadic. Average. June and July.

Diphtheria. Epidemic. Severe. January, 1890, February, 1890, Manville. November, 1890, Albion.

Fever, Malarial. Endemic. Epidemic. Average severity. Summer, 1890.

Fever, Typhoid. Sporadic. Average. May and June, 1890.

Measles. Epidemic. Average. January and February, 1890.

Scarlatina. None.

Whooping Cough. None.

5. No other disease epidemic, except Influenza. January and February, 1890.

Diseases not zymotic:

Bronchitis, Acute. Usual amount. Average type. November and October.

Pneumonia. Usual amount. Average. September, October and November.

Rheumatism. Usual number. Average severity. September.

6. No other diseases had unusually large prevalence.

7. None attended with unusual fatality.

8. Sometime ago a gentleman did some work in a certain church-basement, and a few weeks after his children had Diphtheria, three of them died. As he told me himself, he made inquiries, and learned that the body of a child, from another town, that had it, had been brought here to be buried and was left under the church for some time. Is it possible that the disease was carried by this man to his children? I, for my part, think it might be.

9. I think there is some advance in public sentiment in regard to the importance of sanitary surroundings; but cannot include our manufacturing company.

10. There are five or six tenement houses, on Cumberland side of the river in Manville, where water fills the cellars once or twice every month in the year.

S. A. BOUVIER, M. D.

2. NORTH PROVIDENCE, JOHNSTON AND SMITHFIELD.

3. Including sickness of all kinds, the general amount during the past year has been about same, but much more regular—denoting absence of epidemic.

4. Zymotic diseases have prevailed during the year as follows:

Cholera Infantum. Sporadic. Mild. June and July. In the villages along the valley.

Croup. Sporadic. Mild. January to April. Not limited in location.

Diarrhoea and Dysentery. Sporadic. Mild. July to October. Not limited.
 Diphtheria. Sporadic. Mild. January to May. Location not limited.
 Fever, Malarial. Sporadic. Mild. May to August. All about.
 Fever, Typhoid. Sporadic. Mild. April and May, September and October.
 No particular locality.

Measles. None.

Scarlatina. None.

Whooping Cough. None.

5. No zymotic disease epidemic except "La Grippe."

Other diseases :

Brain, Inflammation and Congestion of. None.

Bronchitis, Acute. Very large. January to May.

Pneumonia. Large. January to March.

Rheumatism. Average amount. Mild. Not limited.

6. No disease had unusually large prevalence during the year except La Grippe, and perhaps bronchitis.

7. No unusual fatality.

9. As to any advance in public sentiment or views of individuals in regard to the importance of sanitary surroundings ; or interest in means of preventing disease. There is an increased watchfulness on the part of the people at large, and greater care on the premises of corporations, particularly Allendale and Stillwater.

10. As to believed sources of ill-health in my circuit, I think the sanitation of Centredale and Georgiaville might be improved. I would advise a visit to Georgiaville in the spring. I think a Board of Health should be appointed in North Providence and Smithfield.

C. A. BARNARD, M. D.

2. PAWTUCKET and vicinity.

3. There was much more sickness in January and February than usual. About an average or less than average during rest of the year.

4. The following zymotic diseases prevailed during the year :

Cholera Infantum. Sporadic. Mild. Summer.

Croup. Sporadic. Average severity. Winter.

Diarrhoea and Dysentery. Sporadic. Average severity. Summer.

Diphtheria. Sporadic. Mild. Fall and winter.

Fever, Malarial. Large amount. Mild. Summer.

Fever, Typhoid. Sporadic. Mild. Fall.

Measles. Sporadic. Mild. A little all of the year.

Scarlatina. Sporadic. Mild. A little all of the year.

Whooping Cough. Considerable. Mild.

5. No zymotic disease epidemic except influenza, first of the year.

Diseases not zymotic :

Brain, Inflammation and Congestion of. Small number.

Bronchitis, Acute. Average number.

Pneumonia. Small number. Cold season.

Rheumatism. Average number. All seasons.

Stomach, Acute diseases of. Average number.

6. No other disease had unusually large prevalence.

7. No disease attended with unusual fatality.

8. Nothing new that seemed to indicate that Scarlet Fever, Diphtheria, or Typhoid Fever had been taken or communicated from one person to another.

9. No noticeable advance in public sentiment or views of individuals in regard to the importance of sanitary surroundings.

10. As to generally believed sources of ill-health in this city, Hammond's Pond and Moshassuck River may be mentioned.

F. B. FULLER, M. D.

2. PAWTUCKET.

3. Taking sickness of all kinds since subsidence of epidemic "La Grippe," should say general amount ; had been slightly less than usual during the year.

4. Zymotic diseases have prevailed as follows during the past year :

Cholera Infantum. Sporadic. Average number. July to October. General.

Croup. A few cases only in the city I think. Most in November and December.

Diarrhœa and Dysentery could hardly be said to be epidemic perhaps, but we had, beside the usual prevalence in the hot months, more during the last three months of year than is usually the case.

Diphtheria. A small amount compared with past five years is my impression. November and December most prevalent.

Fever, Malarial. Many mild cases. Not as many severe cases as last year.

Fever, Typhoid. Sporadic. Less than usual I think.

Measles. Personally don't remember any cases.

Scarlatina. A few cases only.

Small Pox. None.

Whooping Cough. Almost epidemic. Mild form.

5. No other zymotic disease epidemic.

Diseases not zymotic :

Brain, Inflammation and Congestion of. Small number only.

Epidemic La Grippe predominated and overshadowed these cases in January, February and March even. We had more than usual in the last part of year of catarrhal form of acute bronchitis.

Considerable pneumonia in January, February and March, perhaps less than usual in last part of year.

Rheumatism. I think less than the usual amount.

Stomach, Acute diseases of. Average.

6. No other diseases had unusually large prevalence.

7. No unusual fatality.

J. A. CHASE, M. D.

2. PROVIDENCE CITY.

3. Taking sickness of all kinds, the general amount has been ten per cent. more than usual during the past year.

4. The following zymotic diseases have prevailed during the year:

Cholera Infantum. Sporadic. Usual type. All localities.

Diarrhœa and Dysentery. Large amount. Warm season. All about.

Diphtheria. Full amount. Ordinary severity. City and vicinity.

Fever, Malarial. Small amount. Generally mild.

Fever, Typhoid. Sporadic. Average severity. Mostly September and December.

Scarlatina. Considerable. Usual severity. Last four months of the year.

Whooping Cough. Almost epidemic in December.

Influenza. Epidemic. January, February and March.

Diseases not zymotic:

Brain, Inflammation and Congestion of. Not many. Uncomplicated.

Bronchitis, Acute. Large amount. First and last months of the year.

Pneumonia. Unusually prevalent. Many cases. Sequel to influenza. January and February.

Rheumatism. Usual prevalence. All months.

Stomach, Acute diseases of. Usual number. Warm months.

6. No diseases not named had unusually large prevalence.

7. No unusual fatality except pneumonia.

8. No unusual circumstance occurred that seemed to indicate that Scarlet Fever, Diphtheria, or Typhoid Fever had been communicated from one person to another.

9. It is evident that there is a gradual advance in public sentiment in regard to the importance of sanitary surroundings. The demand for better sewerage, for better ventilation of the public schools and other public buildings, the calls for abatement of nuisances suspected of being unhealthful, &c.

P. S. REDFIELD, M. D.

2. PROVIDENCE CITY.

3. Including sickness of all kinds, the general amount has been more than

usual during the past year, especially during the first three months of the year.

Cholera Infantum. Usual prevalence.

Diarrhœa and Dysentery. Usual prevalence. Warm months.

Diphtheria. Sporadic cases. Average severity. During the year.

Fever, Malarial. Very small amount. All seasons.

Fever, Typhoid. Sporadic. Mostly in Autumn.

Scarlatina. Of increasing frequency during November and December, but of a mild type.

Small Pox. None.

Whooping Cough. Very prevalent in some sections of the city during December.

5. The only zymotic disease epidemic, was the Influenza. Epidemic during January and February.

Diseases not zymotic:

Acute bronchitis, pneumonia and broncho-pneumonia were frequently associated with influenza during the first quarter of the year. Pneumonia was especially fatal during January.

6. No other diseases had unusually large prevalence.

7. Pneumonia was attended with unusual fatality.

9. Have observed no unusual advance in public sentiment or views of individuals in those respects.

10. As to any known or generally believed source of ill-health in this circuit, I do not know of any not heretofore known.

G. D. HERSEY, M. D.

2 SCITUATE and adjoining towns.

3. Taking sickness of all kinds, the general amount had been about the average during the past year.

4. Zymotic diseases have prevailed in this circuit during the past year as follows:

Cholera Infantum. Small amount. Severe form. Summer.

Croup. Very little.

Diarrhœa and Dysentery. Large amount. Average severity. Summer and fall.

Diphtheria. Sporadic. Small amount. Mild.

Fever, Malarial. Hardly any.

Fever, Typhoid. Very small amount. Mild. Fall.

Measles. Small amount. Severe. Spring.

Scarlatina. None.

Whooping Cough. Large amount. Severe. Fall months.

5. No zymotic disease epidemic except influenza or La Grippe in January and February.

Diseases not zymotic :

Brain, Inflammation and Congestion of. None.

Bronchitis, Acute. Large amount. Average severity. Spring and fall.

Pneumonia. Average amount. Severe. Spring and fall.

Rheumatism. Large amount. Mostly in the fall.

Stomach, Acute diseases of. Small amount. Not severe.

6. No other diseases had unusually large prevalence.

7. Pneumonia was attended with unusual fatality.

8. Nothing new that seemed to indicate that Scarlet Fever, Diphtheria, or Typhoid Fever had been taken or communicated from one person to another.

9. People evidently in the mass, are more particular as to sanitary surroundings.

10. No generally believed source of ill-health.

W. J. SMITH, M. D.

2. WESTERN SCITUATE, parts of FOSTER and vicinity.

3. Taking out La Grippe that occurred at commencement of January, the general amount of sickness would be in my judgment 5 per cent. less for the year closed.

4. The following zymotic diseases have prevailed during the past year:

Cholera Infantum. Sporadic. Average to severe. August. Rockland.

Croup. Sporadic. Severe. December. Chopmist.

Diarrhœa and Dysentery. Sporadic. Average. Autumn. Scituate.

Diphtheria. Sporadic. Average. Spring and fall. Rockland.

Fever, Malarial. Sporadic. Severe. Spring. Chopmist.

Fever, Typhoid. Sporadic. Mild. Fall. Scituate.

Measles. None.

Scarlatina. None.

Small Pox. None.

Whooping Cough. Epidemic. Mild. Fall. Scituate.

5. No other zymotic disease epidemic.

Diseases not zymotic :

Brain, Inflammation and Congestion of. Average number. January, during La Grippe.

Bronchitis, Acute. Average prevalence. Fall and spring, most prevalent.

Pneumonia. Average prevalence. Winter months.

Rheumatism. Average number. Winter months.

Stomach, Acute diseases of. Average number. All seasons.

6. No other diseases had unusually large prevalence, except La Grippe, during January, 1890.

7. No unusual fatality.

8. No special circumstances have occurred of marked import. But the general impression is constant, that they must owe their origin to a specific and contagious germ, and that their special bacillus will ultimately be discovered. The surprising results that have followed the discovery of the bacillus of tuberculosis by Dr. Koch seems to render this absolutely certain.

9. As to increased interest in means of preventing disease, I believe there is considerable advance being made, but chiefly in the instruction of the rising generation, and in the public schools.

10. Do not know of any generally believed source of ill-health in this circuit.

B. ARNOLD, M. D.

2. SMITHFIELD, NORTH PROVIDENCE, AND JOHNSTON.

3. Taking sickness of all kinds, the general amount has been about as usual in this circuit during the past year.

4. The following zymotic diseases have prevailed :

Cholera Infantum. No genuine cases.

Croup. No membraeous croup. A few cases of catarrhal laryngitis. Not severe.

Diarrhœa and Dysentery. Average number of cases. Mostly in summer. Not so severe as usual.

Diphtheria. Epidemic in Stillwater. Sixteen cases. In August and September. Five cases severe, others mild. Marked tendency to take on nasal form. None laryngeal. Two complicated with acute nephritis. Two palatal paralysis, one cardiac paralysis coming on suddenly when apparently well, one week after disappearance of throat affection. Two deaths, one from cardiac paralysis, one from exhaustion. No known source of contagion. One year previously, in spring, in Georgiaville, one and one-half miles from Stillwater, a very fatal epidemic of diphtheria, of eight cases, six fatal.

Fever, Malarial. Not so many cases as in previous years.

Fever, Typhoid. Only one case. Very mild.

Measles. None.

Scarlatina. None.

Small Pox. None.

Whooping Cough. One case. Mild. I understand there were several cases without physician in attendance.

5. No other zymotic disease epidemic, except Influenza in January and February. Mostly mild. No deaths. In spring, following the "grippe," a peculiar acute bronchitis, with severe constitutional symptoms, prevalent among children resembling La Grippe. During the season of La Grippe had very few cases among children. During fall and winter of 1890, a few mild cases of La Grippe among adults.

Diseases not zymotic:

Brain, Inflammation and Congestion of. Within a period of three months,

three cases of meningitis, probably tubercular—two of 4 years of age each, one 7 years,—two primary, one secondary to long standing Pott's disease ; a fourth case of infant with spina bifida dying after prolonged diarrhœa and general marasmus. Symptoms suggestive of tubercular disease. All these four in village of Georgiaville.

Bronchitis, Acute. Average amount. Cool months.

Pneumonia. Average number. Mostly mild.

Rheumatism. No acute cases. Some sub acute. Several chronic.

Stomach, Acute diseases of. Average number of cases among children.

6. No other diseases had large prevalence.

7. No unusual fatality.

8. Nothing new that seemed to indicate that Scarlet Fever, Diphtheria, or Typhoid Fever had been taken or communicated from one person to another.

9. No advance in public sentiment noticed in this circuit in regard to the importance of sanitary surroundings.

10. Do not know of any known or generally believed source of ill-health in this circuit.

I. S. Cook, M. D.

2. WOONSOCKET, NORTH SMITHFIELD, SMITHFIELD, ETC.

3. Taking sickness of all kinds, the general amount has been during the past year, one quarter more than usual on account of La Grippe.

4. The following zymotic diseases have prevailed during the year:

Cholera Infantum. Sporadic. Average severity. July and August. Woonsocket.

Croup. Sporadic. Average. Usual season. All about.

Diarrhœa and Dysentery. Sporadic. Average. Usual season. All about.

Diphtheria. Few cases sporadic. Average. Winter and fall. All about.

Fever, Malarial. Sporadic. Mild type. All about.

Fever, Typhoid. Sporadic. Mild form. All about.

Measles. Sporadic. Light form. January to April, September to January. Woonsocket.

Scarlatina. Sporadic. Very light form. January to September. All about.

Small Pox. None.

Whooping Cough. Sporadic. Average. October, 1890, to January, 1891. Everywhere.

5. No zymotic diseases epidemic.

Of diseases not zymotic:

Brain, Inflammation and Congestion of. Small amount.

Bronchitis, Acute. Average in number and severity. Cool months.

Pneumonia. Average amount. Usual season.

Rheumatism. Large. Not severe. Every month since La Grippe, at the beginning of the year.

Stomach, Acute diseases of. Average number.

6. La Grippe in January, February and March was universal. Severe, and left its effects upon all.

7. Pneumonia and bronchial affections following La Grippe.

8. A few cases of scarlet fever were spread through the schools, on account of its light character, causing it to be overlooked, as the children were not confined to house.

9. All families are more alert each year in regard to contagiousness of diseases, and also to causes from unsanitary surroundings. They demand more knowledge and advice from physicians and health officers.

10. No known or generally believed source of ill-health at present, but increased use of City water will, with no additional drainage or sewerage, certainly prove a very serious source of ill-health in the *very near future*.

WM. C. MONROE, M. D.

WASHINGTON COUNTY.

2. CHARLESTOWN AND RICHMOND.

3. Taking into account sickness of all kinds, the general amount has been about as usual in my circuit during the past year.

4. Zymotic diseases have prevailed during the past year as follows:

Diarrhœa and Dysentery. Sporadic. Average severity. September and October. No particular locality.

Diphtheria. Sporadic. Mostly mild, few severe. November and December.

Fever, Malarial. A very few mild cases. August, September and October. Along Pawcatuck River.

Fever, Typhoid. None.

Measles. None.

Scarlatina. None.

Whooping Cough. None.

5. No zymotic disease epidemic except La Grippe, January and February.

Diseases not zymotic:

Bronchitis, Acute. Large number. December.

Pneumonia. Small prevalence. December.

Rheumatism. Small prevalence. March and April.

6. No other diseases had unusually large prevalence.

7. No unusual fatality.

9. Cannot see any advance in public sentiment or views of individuals in regard to the importance of sanitary surroundings, or increased interest in means of preventing diseases.

10. No known or generally believed source of ill-health in this section.

A. A. SAUNDERS, M. D.

2. HOPKINTON and Northern part of WESTERLY.
3. The general amount of sickness during past year has been at least 10 per cent. greater than usual.
4. The following zymotic diseases have prevailed during the year:
Cholera Infantum. Scarcely any.
Croup. Usual amount of croup during winter and spring months.
Diarrhœa and Dysentery. Sporadic. Average severity. July, August and September.
Diphtheria. Sporadic. Mild. Spring and fall months.
Fever, Malarial. None of consequence.
Fever, Typhoid. Sporadic. Mild. October and November.
Measles. Epidemic. Average. March, April and May.
Scarlatina. None.
Small Pox. None.
Whooping Cough. Epidemic. Average. September, October and December.
5. No other zymotic diseases epidemic except La Grippe, January, February and March.
6. Diseases not zymotic:
Bronchitis, Acute. Very large amount. Spring.
Pneumonia. Average amount. Spring.
Rheumatism. Small number. Fall months.
Stomach, Acute diseases of. Small number. Summer.
6. No other diseases had unusually large prevalence.
7. No unusual fatality.
9. No appreciable advance in public sentiment in regard to the importance of sanitary surroundings.
10. No generally believed source of ill-health.

A. B. BRIGGS, M. D.

2. NORTH KINGSTOWN and parts of adjacent towns.
3. Taking sickness of all kinds, the general amount has been an average during the past year.
Cholera Infantum. A few cases sporadic. Mild. Summer and autumn.
Various.
Croup. None
Diarrhœa and Dysentery. Dysentery has been common through early winter months. Mild. Also, October to December. Scattered through the villages.
Diphtheria. None.
Fever, Malarial. None.
Fever, Typhoid. A few cases. Average. October and November. Wickford.

Measles. Epidemic. Mild. January to April. Generally spread through the villages.

Scarlatina. None.

Small Pox. None.

Whooping Cough. Epidemic. Average. January to May. General.

5. La Grippe. Epidemic. January to April. General.

Diseases not zymotic:

Brain, Inflammation and Congestion of. None.

Bronchitis. Acute. Usual number and season.

Pneumonia. A few cases.

Rheumatism. Average. All the year.

Stomach, Acute diseases of. None.

6. No diseases had unusually large prevalence, except as above.

7. No diseases attended with unusual fatality.

C. E. MARYOTT, M. D.

2. SOUTH KINGSTOWN.

3. Including sickness of all kinds, the general amount during the past year has been about an average amount, except for influenza in January and February.

4. The following zymotic diseases have prevailed during the year :

Cholera Infantum. Sporadic. Average severity. Summer. Not localized.

Croup. Sporadic. Average severity. Throughout year. Not localized.

Diarrhœa and Dysentery. Sporadic. Mild. Summer principally. Not localized.

Fever, Typhoid. Sporadic. Mild. Autumn. Principally in Peacedale and Wakefield.

Measles. Epidemic. Severe. March and April. Eastern part of town and Wakefield.

Scarlatina. None.

Whooping Cough. Epidemic. Average. December, *et seq.* Wakefield.

5. Other zymotic diseases epidemic :

Influenza. Mild. January and February. Whole town.

Other diseases as follows :

Brain, Inflammation and Congestion of. None.

Bronchitis, Acute. Large prevalence. Spring, September.

Pneumonia. Average prevalence. Spring.

Rheumatism. Average prevalence. Scattered through whole year.

Stomach, Acute diseases of. Small average. Principally summer and autumn.

6. No other diseases had unusually large prevalence.

7. No unusual fatality.

9. Not much advance in public sentiment in regard to the importance of sanitary surroundings. Some action by the Town Council.

10. Lack of proper sewerage is causing increase of typhoid fever in Wakefield and Peacedale.

P. K. TAYLOR, M. D.

2. SOUTH KINGSTOWN.

3. Taking sickness of all kinds, the general amount has been about as usual during the past year.

Cholera Infantum. Sporadic. Average severity. Summer. Peacedale and Wakefield.

Croup. Few cases.

Diarrhœa and Dysentery. Average prevalence. All about.

Diphtheria. Sporadic. Average severity. Autumn. Pier.

Fever, Malarial. Sporadic. Average severity. All seasons.

Fever, Typhoid. Large number. Average severity. Fall.

Measles. Some German measles.

Scarlatina. Sporadic. Severe. Cases are rare here.

Whooping Cough. Almost epidemic. Average severity. Fall and winter. Town.

5. No other zymotic disease epidemic, except La Grippe, January and February.

Of diseases not zymotic :

Brain, Inflammation and Congestion of. None.

"Colds." As usual.

Pneumonia. Usual number. Spring.

Rheumatism. Large. Very common complaint. All seasons.

Stomach, Acute diseases of. Some Gastritis.

6. Unusually large prevalence of cases of Erysipelas during the year. Non-zymotic diseases form a big part of a country physician's practice.

7. No diseases have been attended with unusual fatality.

8. Numerous isolated zymotic cases appears to be the rule, especially in Diphtheria, that is, frequently only one child in a family of several children will have it.

9. In regard to the importance of sanitary surroundings, a system of sewerage at Narragansett Pier has been in process of construction, and other improvements.

10. No generally believed source of ill-health about here.

J. E. PERRY, M. D.

2. SOUTH KINGSTOWN.

3. Taking sickness of all kinds, the general amount has been about the same as usual in this circuit during the past year.

4. Zymotic diseases have prevailed during the past year as follows :

Cholera Infantum. Sporadic. Average. July. Kingston.

Croup. Sporadic. Mild. April. Wakefield.

Diarrhœa and Dysentery. Sporadic. Severe. July and August. Narragansett Pier and Wakefield.

Diphtheria. Sporadic. Mild. September. West Kingston and Rocky Brook.

Fever, Malarial. Sporadic. Average. March. Peacedale and West Kingston.

Fever, Typhoid. Sporadic. Large. Severe. September and October. Kingston and Wakefield.

Measles. Sporadic. Very mild. February. Usquepaugh and West Kingston.

Scarlatina. Sporadic. Mild. February. Rocky Brook.

Whooping Cough. Sporadic. Severe. February and April. Peacedale, Narragansett Pier and Rocky Brook.

Of diseases not zymotic :

Brain, Inflammation and Congestion of. Small amount. July and August.

Bronchitis, Acute. Average number. June and July.

Pneumonia. Large number. March and April.

Rheumatism. Large amount. January and September.

Stomach, Acute diseases of. Small amount. May, July and August.

6. Unusually large prevalence of La Grippe.

7. The diseases that have been attended with unusual fatality were Typho-Pneumonia, Dysentery and Diarrhœa.

9. As to any advance in public sentiment in regard to the importance of sanitary surroundings, I think in the past year our Town Council have taken every step possible to perfect the sanitary condition of our town, which is good at the present time.

10. No generally believed source of ill-health.

J. S. RIDGE, M. D.

2. SOUTH KINGSTOWN, EXETER AND RICHMOND.

3. Taking sickness of all kinds, the general amount has been about as usual in my circuit during the past year.

4. The following zymotic diseases have prevailed :

Cholera Infantum. None.

Croup. None.

Dysentery. Epidemic. Average severity. August and September. Exeter.

Diphtheria. Sporadic. Mild. September. Richmond.

Fever, Malarial. None.

Fever, Typhoid. Very small amount.

Measles. None.

Scarlatina. None.

5. No zymotic diseases epidemic except dysentery.

Diseases not zymotic :

Brain, Inflammation and Congestion of. None.

Bronchitis, Acute. Usual amount. Average severity. Fall and winter.

Rheumatism. Average amount. Winter and fall.

Stomach, Acute diseases of. None.

6. No other diseases had unusually large prevalence.

7. No unusual fatality.

9. Some advance in views of individuals in regard to increased interest in means of preventing disease. In all cases of contagious diseases all the families want to use all precaution they can.

10. No generally believed source of ill-health in this circuit.

E. E. KENYON, M. D.

2. WESTERLY.

3. With sickness of all kinds the general amount has been about an average in this circuit during the past year.

4. The following zymotic diseases have prevailed during the year.

Cholera Infantum. Sporadic. Average. Summer and fall.

Croup. No true croup.

Diarrhœa and Dysentery. More than an average, especially in fall and winter months.

Diphtheria. None.

Fever, Malarial. Sporadic. Mild. All except coldest weather.

Fever, Typhoid. Only cases seen were across the river in Connecticut.

Measles. Epidemic. Average severity. Spring.

Scarlatina. None in my practice.

Small Pox. None.

Whooping Cough. Epidemic. Average severity. Spring.

5. No other zymotic disease epidemic except Chicken Pox.

Diseases not zymotic :

Brain, Inflammation and Congestion of. Small number only.

Bronchitis, Acute. Average number, usual type. Spring, fall and winter.

Pneumonia. Average.

Rheumatism. Average. All seasons.

Stomach, Acute diseases of. Average amount.

6. No other diseases had unusually large prevalence.

7. No unusual fatality.

8. As to circumstances that seemed to indicate that Scarlet Fever, Diphtheria or Typhoid Fever had been taken or communicated from one person to another, I believe I have given statements in previous years indicating that Scarlet Fever and Diphtheria are so communicated, but I have never seen any evidence that Typhoid Fever is so taken or communicated.

9. Some advance in public sentiment in regard to the importance of sanitary surroundings and interest in means of preventing diseases, is shown by increased interest in a good water supply and attention to drainage.

10. No known or generally believed source of ill-health at present, but belief is gaining ground that the numerous cesspools scattered through the village will yet prove to be such a source.

J. H. MORGAN, M. D.



TOWN SANITATION.



REPORTS FROM TOWNS.

IN RELATION TO SANITARY IMPROVEMENTS, ETC.

A complete annual report of a State Board of Health properly includes an account of the measures taken each year by municipal authorities, corporations or individuals, for the promotion of the health of the communities under their respective supervision or control. In order, therefore, to ascertain the facts in relation to such measures, and for the purpose of presentation in this Report, as in the reports heretofore issued, and in the continuance of the design to keep well informed of all proceedings throughout the State, on the part of town or city councils, or any form of municipal authority, in the appointment of health officers or boards of health; and in the direction of improvements which have in view and seem to promise the promotion of public health; by the abatement of nuisances; the removal of unsanitary conditions and surroundings; or by the introduction of water for general use; or construction of sewers; or the establishment of other public works, which may not only be of great public utility and convenience, but also serve in some measure, large or small, in the prevention of disease, the Secretary has, as heretofore, solicited replies from the town and city clerks of the several towns and cities, or other municipal officers, in answer to questions proposed in a circular sent for that purpose.

It is designed and hoped that a connected history may thereby be secured of all sanitary improvements of a public character in all parts of the State, from year to year; and the gradual awakening of the citizens of the different towns to the necessity of sanitary public measures shown; and also whatever intelligent appreciation of such necessity, and whatever public spirit in existence in the towns there may be, as manifested by the readiness with which needed sanitary measures are adopted.

The following is the form of circular sent at close of the year 1890.

CIRCULAR No. 108.

OFFICE OF SECRETARY STATE BOARD OF HEALTH,

48 WEYBOSSET STREET,

PROVIDENCE, R. I. Jan. 1, 1891.

To the Town Clerk:

It is, by statute law, made the duty of the Secretary of the State Board of Health to make inquiries of town or city clerks, or of the clerks of local boards of health, in regard to the general health and sanitary condition of the towns, and also in regard to measures taken for the improvement of the same.

The law reads as follows:

PUBLIC STATUTES, CHAPTER 83.

SEC. 6. The Secretary of the said Board shall make inquiry, from time to time, of the clerks of town and local boards of health, and practicing physicians, in relation to the prevalence of any disease, or knowledge of any known or generally believed source of disease, or causes of general ill-health, and also in relation to the proceedings of the said boards of health, in respect to acts for the promotion and the protection of the public health, and also in relation to diseases among domestic animals, in their several towns and localities, respectively; and the said clerks of town and local boards of health, and said practicing physicians, shall give such information, in reply to said inquiries, of such facts and circumstances as have come to their knowledge.

The Secretary therefore respectfully makes the following inquiries:

1. Has any work for the promotion of public health been contemplated or completed in your town by the town authorities, or by private enterprise, during the year? If any, please state what.
2. If by introduction or extension of water service for general use, please state what proportion of the population, by estimation, was supplied with the same at the end of the year.*
3. If by sewerage, state what the aggregate length of sewers, by estimation or otherwise, and about what proportion of the population had drainage connection with them at the end of the year.*

* If not known by the person replying, please state where or of whom such information may be obtained.

4. If by new ordinances in abatement of nuisances, or in improvement in heating or ventilating public buildings, halls, school houses, &c., or by drainage, or by compelling the removal of excreta, garbage, house refuse, &c., or for any sanitary purpose, please give terms and date of enactment of such town ordinance, or send copy of same, also state how far, to your best knowledge, all the sanitary ordinances have been enforced. Copies of town ordinances especially desired.

5. Has your town any legal board of health beside the town council? If so, please give the names of the officers of the same.

6. Please give the names of the health officers of your town.

7. Has gratuitous vaccination been provided in your town during the past year? What proportion of the population was vaccinated, according to your best knowledge?

8. Have undertakers promptly sent in their returns of death? Please give names of any who do not. (See Public Statutes, Chap. 85, Sec. 1.)

Respectfully,

CHAS. H. FISHER,

Sec. State Board of Health.

N. B.—The town or other clerk should charge a remunerative fee for replying to the above circular, and present to the town council or board of health, it being a service required by law.

REPORTS FROM TOWN CLERKS

In relation to the prevalence of disease, and to municipal proceedings in regard to public sanitary improvements, the promotion of public health, etc.

BRISTOL COUNTY,

BARRINGTON.

1. Nothing particular for the promotion of public health by the town authorities during the year.
2. Some extension of water service for general use.
3. No sewerage.
4. Nothing unusual in the abatement of nuisances, or for any sanitary purpose.
5. Board of health, the town council.
6. Health officers, town council, Joseph U. Starkweather, Orrin S. Anthony, Benjamin K. Smith, Isaac T. Barnum, William R. Martin.
7. Gratuitous vaccination was not provided during the past year.
8. Undertakers have promptly sent in their returns of death.

M. H. WOOD, *Town Clerk.*

BRISTOL.

1. No unusual work for the promotion of public health by the town authorities during the year.
2. See report Warren and Bristol Water Works.
3. The aggregate length of sewers now constructed not exactly known. Additional sewer connections during the year.
4. Town ordinances relative to health are enforced by the health officer and town police.
5. Board of health, the town council.
6. Health officer, George H. Peck.
7. Gratuitous vaccination was provided during the past year. The proportion of the population vaccinated was about 50.
8. The undertakers in this town are very prompt in sending in their returns.

H. F. BENNETT, *Town Clerk.*

WARREN.

1. There has been no special work of that kind.
2. No large extension of water service for general use. The proportion remains practically unchanged.
3. There has been no change practically in the respect of sewers. One sewer (private) emptying into the dock has been extended, so that its mouth is always covered by tide-water.
4. No new ordinances have been adopted of a sanitary character.
5. No legal board of health beside the town council.
6. Health officer, Michael B. Conroy.
7. Gratuitous vaccination has been provided during the past year. About one-sixteenth of the population was vaccinated at public charge.
8. All undertakers have sent in their returns of death.

C. B. MASON, *Town Clerk.*

KENT COUNTY.

COVENTRY.

1. No particular work for the promotion of public health by the town authorities. Many private cesspools and privy-vaults have been constructed for the protection of the public health.
2. A new water service has been commenced, but not yet completed, for the villages of Washington, Anthony and Quidnick.
3. No public but several private sewers of considerable length have been put in, perhaps one-twentieth of our population are benefitted.
4. No new ordinances have been passed, and no measures taken to promote sanitary conditions.
5. Board of health, the town council.
6. Health officers, John Winsor, M. D., Frank B. Smith, M. D., and Charles L. Ormsbee, M. D.
7. No gratuitous vaccination provided during the past year.
8. Undertakers have promptly sent in their returns of death.

S. W. GRIFFIN, *Town Clerk.*

EAST GREENWICH.

1. Not much work for the promotion of public health by the town authorities during the year.
2. The extension of water service for general use was not large last year.
3. No change in the aggregate length of sewers.

4. No new ordinances in abatement of nuisances, or for any sanitary purpose.
5. Board of health, the town council.
6. Health officer, James H. Eldridge, M. D.
7. No gratuitous vaccination provided during the past year.
8. Undertakers have promptly sent in their returns of death.

E. STANHOPE, *Town Clerk.*

WEST GREENWICH.

1. No new work for the promotion of public health by the town authorities during the year.
2. No water service for general use.
3. No public sewerage.
4. No new ordinances in abatement of nuisances or for any sanitary purpose.
5. Board of health, the town council.
6. No health officer appointed.
7. Gratuitous vaccination was not provided during the past year.
8. Undertakers usually have promptly sent in their returns of death.

W. N. SWEET, *Town Clerk.*

WARWICK.

1. No very important work for the promotion of public health by the town authorities during the year.
2. Active work for the further introduction of water for general use will be commenced in 1891.
3. No public sewerage for any sanitary purpose.
4. No new ordinances during 1890.
5. Board of health, the town council.
6. Health officer, Albert G. Sprague, M. D.
7. Gratuitous vaccination was provided during the past year. Cannot say what proportion of the population was vaccinated. J. B. Hanaford, town physician.
8. Undertakers have promptly sent in their returns of death.

J. T. LOCKWOOD, *Town Clerk.*

NEWPORT COUNTY.

JAMESTOWN.

1. Various kinds of work for the promotion of the public health have been contemplated and some completed by the town authorities, as well as by private enterprise, during the year. The main sewers have been extended 1,700 feet, water introduced, etc.

2. Water system completed. Cost of plant, including stand pipe, \$20,000. Water taken by six hotels and five or six dwellings.

3. The aggregate length of sewers, by estimation, is about one and one-half miles, connected with five hotels and ten or twelve dwellings.

4. See new ordinance appended. The health officer gave proper notice to parties attended to.

TOWN COUNCIL, JAMESTOWN, R. I., June 16, 1890.

WHEREAS, There are a number of privy-vaults in the thickly settled part of the town, and as there is great danger of the water in the wells being contaminated by such places, therefore resolved that the health officer be and he is hereby directed to order all such places within the following boundaries filled up before the first of July, 1899: That part of the town bounded northerly by the southerly line of the Green farm, westerly by Clinton street and southerly by the northerly line of the John H. Gardiner farm.

Instead of privy-vaults, galvanized-iron tubs or pails are recommended, to be emptied at least twice a week in hot weather, and it is further ordered that such tubs or pails shall be emptied between sunset and sunrise.

A true copy: Attest,

CHAS. E. WEEDEN, *Town Clerk.*

Your attention is called to the above ordinance, which has been placed in my hands for enforcement.

ABBOTT CHANDLER, *Health Officer.*

5. Board of health, the town council.

6. Health officer, Abbott Chandler,

8. Undertakers have promptly sent in their returns of death.

C. E. WEEDEN, *Town Clerk.*

LITTLE COMPTON.

1. No particular work for the promotion of public health by the town authorities.

2. No water service for general use.

3. No sewers constructed by the authorities.

4. No sanitary ordinances were adopted.

5. Board of health, the town council.

6. Health officers, Hon. Town Council.

7. No gratuitous vaccination was provided during the past year.

8. Undertakers have promptly sent in their returns of death.

F. R. BROWNELL, *Town Clerk.*

MIDDLETOWN.

1. No work of large extent for the promotion of the public health has been undertaken or planned in this town during the year 1890. Some drains and

waterways were reported as about to be constructed on land of the Newport Land Trust at Easton's Point. Not much was done, as reported.

2. Only a few cottages at Easton's Point would be supplied by the construction of the water mains above mentioned, they taking their water from Easton's Pond.

3. No public sewers have been constructed in Middletown during the year 1890.

4. A sanitary code was adopted by the town council, January 20, 1890, a copy of which was forwarded to the State Board of Health. This code was printed and distributed, and so far as I have learned its provisions have been generally complied with.

5. Board of Health, the Town Council.

6. Health officer, John Peckham.

7. The town council appointed a committee in December last, to contract with some suitable person for the gratuitous vaccination of the people of Middletown, and opportunity will be given at once for vaccination to all who desire it.

8. Undertakers have promptly sent in their returns of death.

A. L. CHASE, *Town Clerk.*

NEWPORT CITY.

1. The authorities have had under consideration various sanitary improvements, and private parties have also made very considerable changes and some new work for hygienic purposes.

2. The water service has been extended or increased in number of families, and other establishments supplied.

3. System of sewerage now complete. No sewerage finds outlet in the harbor. All old sewers so emptying have been closed.

4. New ordinances in relation to improvements only. A new cremator for garbage is under negotiation.

5. Newport has a board of health, and was the first municipality in the state to establish one. Officers of the board: C. F. Barker, M. D., president; F. H. Rankin, M. D., secretary; P. S. Kaull, executive officer.

Mayor Thomas Coggeshall, in his inaugural, alludes to various sanitary matters as follows:

Newport Hospital.—This institution is approved in high terms, and words of appreciation are given to the work of the volunteer medical staff, the superintendent and nurses. The necessity of a ward for women and children is imperative, and a fund of \$25,000 is being raised for the purpose, for which an appeal is made. During the year 397 persons have been treated, a daily average of 31 patients, inside the hospital. The district nurses have visited 92 different houses, making 1330 visits during the year.

Board of Health.—The fidelity of this board is praised, its attention to the best method for the disposal of house offal noted in its unanimous recommendation

of incineration as the only sure and practical method of its disposal announced. It is imperative that land belonging to the city shall be used, or that land be purchased, and that a crematory be built. The offal cannot be safely taken to sea. The use of a scow is declared impracticable. There should be no indifference or halting in the appropriation as recommended by the board of aldermen.

Parks.—The care of the parks during the year is approved, and still further improvement recommended, especially at Fort Greene, with its fine outlook to the bay. The purchase of the Ellery lot at the junction of Farewell and Thames streets as a park is again recommended.

Inspector of Buildings.—A recent act of the General Assembly authorizes the mayor of each city of this state to appoint an inspector of buildings. I shall interpret it as authorizing me to appoint an inspector, and after watchfulness of many buildings that have been long built, and of others recently erected, I shall regard it as my duty to appoint such an official. It will be your duty to fix the salary of the officer before appointment is made. Life should be protected by requiring substantial fire escapes in the construction of large and high buildings, and also of many others.

The following statements in relation to Newport improvements, interests and needs are taken from a circular issued in the early autumn by the Newport Sanitary Protection Association, which, as is well known, has been for these many years the irrepressible sanitary monitor, and, as it were, the vigilant sentinel upon the walls of the city, giving prompt warning of dangers to health and life, seen and unseen, abounding here and there in divers conditions and circumstances, and thus acting as a most important factor in arousing and elevating the sanitary sentiment of the city, and the accomplishment of many sanitary improvements :

“There have been repeated instances during the twelve years since the association was established in 1878, to show its usefulness. Fresh illustrations have recently occurred.

Upon the adoption by Newport of its general plan of sewerage, it was announced as one of the most important features that all sewers then entering the harbor were to be discontinued, and the waste of the whole town conveyed by a submarine syphon, beyond the breakwater. During November last, however, it was deliberately undertaken by the city authorities to permanently discharge into the upper harbor by a new and very large sewer, the greater portion of the sewage of the northern ward. This suicidal action was arrested only through an immediate and energetic protest by the council of the association, followed and aided by a similar one by the board of health. The association, compelled by its charter to assume the protection of several of its members resident in that neighborhood, the health of whose households would have been seriously imperiled, formally notified the City Council that the question was a broad and general one, involving not merely the safety of the quarter most directly affected, but the interests of every person holding property in Newport.

In consequence of these protests, the construction of the proposed sewer mouth was discontinued, and connection made with the general outlet—as should have been done at first. In addition, and as a direct result of the agitation, the old

Bridge Street sewer, the last remaining of those that had formerly entered the harbor, has been removed and the important principle has thus been finally established, that hereafter no sewage is to be permitted to pollute the waters of Newport.

Again. The Newport Gas Company has recently commenced the manufacture of "Water Gas," and is at present distributing it to the public. This is a very poisonous agent and, if escaping, is much more dangerous to health and life than the Coal Gas which it has hitherto used for illuminating purposes. The Council of the Association, considering itself called upon to investigate the question, requested Professor Wolcott Gibbs of Newport and of Harvard University, to report upon it. He did so with extreme thoroughness, and in consequence a bill was submitted by the Association to the General Assembly, providing that the manufacture of illuminating gas containing more than ten per cent., (the admitted danger line) of the deadly element, Carbonic oxide, should be forbidden. Several hearings were held by the Legislative Judiciary Committee, at Providence, at which testimony was given by Professor Gibbs, and by Professor Munroe of the United States Torpedo Station, Colonel Honey Honorary Counsel of the Association, and others of its officers and members. Though the Judiciary Committee, with practically complete unanimity, reported the bill favorably to the Assembly, the combined efforts of the Gas Companies, of Rhode Island and of other States, secured its defeat; but the subject is of so very great importance that it is proposed by the Association to present a bill of similar character at another session of the Assembly. Under these circumstances, it has become necessary to repeat now, the warning given in December last, "that so long as legislative protection to the individual gas consumer is refused, so long our Newport Gas Company continues to be absolutely independent, and that its own will is the only restraint upon the inducements to supply to its customers the cheaper but more deadly compound." To this new danger must therefore be opposed an increased and constant vigilance and care.

In addition to what has been stated above, the question has arisen if there are not other directions in which in obedience to its charter, the Association can be of use, in the improvement of Newport. Such work, however, requires money. The officers of the Association receive no compensation for their services which are altogether voluntary and the expert and professional aid of its other members and friends has been freely and gratuitously given in emergencies like the recent, yet there have been, and must always continue to be, many necessary current expenses, such as for gas analyses, clerical and other assistance, incurred for the common good. The present letter is for the purpose, by bringing these facts to your notice, of suggesting that if not already a member of the Association you should become such, and thus lend your personal influence and your assistance, both moral and material, to the protection of what are in reality your own interests when the public rights in health matters are threatened or assailed. There are at present some seventy members. This number should be more than doubled and the Association's influence and the range of its useful action correspondingly extended.

NEW SHOREHAM.

1. No work for the promotion of public health, except as stated below.
2. No extension of water service for general use.
3. The aggregate length of sewers, built, about one and one half miles by estimation. Only a few persons have sewers and drainage.
4. No new ordinances except as above.
5. The board of health, the town council.
6. Herbert S. Millikin, health officer.
7. No report in regard to vaccination.
8. Undertakers have promptly sent in their returns of death?

A. N. ROSE, *Town Clerk.*

PORTSMOUTH.

1. As to any work for the promotion of public health, by the town authorities, there was none in particular.
2. No water service for general use.
3. No public sewers.
4. No new ordinances have been enacted the past year.
5. Board of health, the town council.
6. Hon. Town Council, health officers.
7. No gratuitous vaccination was provided during the past year?
8. Undertakers have promptly sent in their returns of death.

P. B. CHASE, *Town Clerk.*

TIVERTON.

1. Nothing for the promotion of public health, completed by the town authorities during the year.
2. No extension of water service for general use.
3. No public sewerage.
4. No addition to sanitary ordinances.
5. Board of health, the town council.
6. Health Officers: N. B. Church, S. E. Borden, D. W. Simmons, A. Walker and F. A. Wilcox.
7. As to gratuitous vaccination during the year? I think nothing was done about it in 1890, but Dr. Yale was employed in 1889, I think. I do not know how many were vaccinated.
8. I believe the undertakers have sent in their returns with reasonable promptitude. No case of neglect occurs to me.

J. T. COOK, *Town Clerk.*

PROVIDENCE COUNTY.

BURRILLVILLE.

1. Nothing new for the promotion of public health, by the town authorities.
2. Public water service not yet introduced.
3. No public sewers.
4. The old ordinances stand.
5. Board of health, the town council.
6. Herbert F. Mowry, health officer.
7. No gratuitous vaccination provided during the past year?
8. Undertakers have promptly sent in their returns of death?

A. MOWRY, *Town Clerk.*

CUMBERLAND.

1. No work for the promotion of public health, by the town authorities during the year?
2. Some extension of water service for general use, by the Pawtucket Water Works Co. Cannot state proportion of takers.
3. No public sewers.
4. No new ordinances in abatement of nuisances, or for any sanitary purposes.
5. Board of health, the town council.
6. Health Officers: Hon. Town Council, Conrad W. Cook, President, Jason B. Adams, Humphrey Gregory, William Burke and Joseph Curran.
7. (No reply).
8. Undertakers have promptly sent in their returns of death.

PATRICK F. KINION, *Town Clerk.*

CRANSTON.

1. There has been no work for the promotion of public health, of importance, by the town authorities during the year.
2. For extension of water service for general use, see Report Providence city Water Works.
3. No public sewerage.
4. No additional sanitary ordinances.
5. Board of health, the town council.
6. Health officers: Fred. W. Bradbury, Superintendent of Health; John Bigbee, Town Sergeant.
7. No gratuitous vaccination provided during the past year?
8. (No reply).

D. D. WATERMAN, *Town Clerk.*

EAST PROVIDENCE.

1. (No reply.)
2. Some extension of water service for general use, by Pawtucket Water Works Co.
3. Very few public sewers.
4. Sanitary ordinances same as last year.
5. Board of health, the town council.
6. Mason B. Wood, health officer.
7. Gratuitous vaccination was provided during the past year. Cannot state proportion.
8. Undertakers do not promptly send in their returns of death.

T. A. SWEETLAND, *Town Clerk.*

FOSTER.

1. No particular work for the promotion of public health, ordered by the town authorities during the year.
2. No water service for general use.
3. No public sewerage.
4. No new sanitary ordinances.
5. Board of health, the town council.
6. Henry Arnold, M. D., health officer.
7. As to gratuitous vaccination I refer you to the health officer who was appointed for that purpose.
8. (No reply.)

E. D. LYON, *Town Clerk.*

GLOUCESTER.

1. Nothing done for the promotion of public health, by the town authorities during the year.
2. No water service for general use.
- 3.
4. No new ordinances in abatement of nuisances, or for any sanitary purposes.
5. Board of health, the town council,
6. Job Owen, health officer.
7. Gratuitous vaccination was provided during the past year. Do not know the number vaccinated.
8. Undertakers have promptly sent in their returns of death.

C. W. FARNUM, *Town Clerk.*

JOHNSTON.

1. No particular work for the promotion of public health, by the town authorities during the year.
2. By the extension of water service for general use, the proportion of the population by estimation supplied with the same at the end of the year was about three-fourths of inhabitants in Olneyville and vicinity.
3. No public sewerage.
4. No sanitary ordinances or action taken.
5. Board of health, the town council.
6. Health officers: Thos. C. Lawton, M. D., Chas. A. Barnard, M. D., Frank A. Payan, M. D., Edgar P. Holbrook.
7. Gratuitous vaccination was provided during the past year.
8. (No reply).

WM. F. KING, *Town Clerk.*

LINCOLN.

1. No work for the promotion of public health, save that attended to by the vigilance of the Health Officer.
2. See Report of Pawtucket water works.
3. The aggregate length of sewers built about 2000 feet this year; have very near 2 miles of sewers.
4. A committee appointed to revise the ordinances with a view to benefit the public health.
5. No board of health beside the town council.
6. William H. Quigley, health officer.
7. Gratuitous vaccination was provided during the past year. Returns show so far 750 vaccinated.
8. Undertakers have sent in their returns of death very well.

E. B. SMITH, *Town Clerk.*

NORTH PROVIDENCE.

1. No new work for the promotion of public health, by the town authorities during the year.
2. No further extension of water service for general use.
3. No public sewers.
4. No new ordinances for any sanitary purpose.
5. Board of health, the town council.
6. Health Officer, Sanford E. Kinnecom.
7. Gratuitous vaccination has not been provided during the past year.
8. Undertakers have sent in their returns of death very well.

T. H. ANGELL, *Town Clerk.*

NORTH SMITHFIELD.

1. No particular work for the promotion of public health, by the town authorities during the year.
2. No water service for general use.
3. No public sewers.
4. No new ordinances specially for any sanitary purpose.
5. Board of health, the town council.
6. Health Officer, John B. Green.
7. No gratuitous vaccination provided during the past year.

B. A. ANDREWS, *Town Clerk.*

SCITUATE.

1. No work for the promotion of public health by the town authorities.
2. No water service for general use.
3. No public sewerage.
4. Sanitary ordinances the same.
5. Board of health, the town council.
6. Health Officer, W. J. Smith, M. D.
7. Gratuitous vaccination was not provided during the past year.
8. (Not stated).

D. H. REMINGTON, *Town Clerk.*

SMITHFIELD.

1. No new work for the promotion of public health by the town authorities, or by any large private enterprise during the year.
2. No water service for general use.
3. No public sewerage.
4. No new ordinances in abatement of nuisances, or for any sanitary purpose.
5. The legal board of health, the town council.
6. Health Officer, Jenckes Smith.
7. No gratuitous vaccination provided during the past year.
8. Undertakers have promptly sent in their returns of death.

OSCAR A. TOBEY, *Town Clerk.*

PAWTUCKET.

1. A very considerable degree of interest has been manifested by the city authorities in measures for the protection of public health.
2. The extension of the water service for the various industrial and domestic purposes has been quite large. See Report of Water Commissioners appended.

3. The question of public sewerage has had large attention and plans for a complete system have been presented the city authorities for consideration. The present sewerage is inadequate to the needs of the city and the fact of the further pollution of the Pawtucket and Moshassuck rivers confronts the thoughtful authorities with a fearful menace to the public health in the lower parts of the city. The sewerage is one, if not the most, important matters that the city has to deal with. A large number of her main streets, sloping towards the Blackstone river, have been supplied with sewers, but not one-third of the streets have yet been sewered. All the sewers that have been built thus far empty their contents into the Blackstone river, and also into the Pawtucket river. In addition to the sewage, the dyestuffs and other offensive matter from manufacturing establishments are poured into the Pawtucket river. The result of making the river a vast basin for sewage and dyestuffs has been to kill or drive away about all the fish, and has also killed all the natural oyster beds.

Not many years ago large quantities of oysters were secured on the natural beds, and fish of all kinds were caught in abundance. Many men made a good business of fishing and some of them built houses for their families from the products of the river. Now only two or three lonesome fishermen are engaged on the river, and about the only thing that they rely upon are eels.

The greatest problem to unravel is the disposition of the sewage of that part of the city that slopes toward the Moshassuck river on the west side. In this part of the city much diphtheria has prevailed this winter and it is believed the disease has been caused by the lack of sewers.

The sewer commissioners have been investigating for several months the best plan to get rid of the sewage, and have visited several places in Massachusetts on a tour of inspection. The most feasible plan in the Moshassuck district, it is believed, is the intermittent downward filtration system. There is one thing more about the matter. The sewage will have to be disposed of in a manner that will not pollute the waters of the Moshassuck river, if the city does not wish to have trouble with the city of Providence. It is believed that the time is not far distant when some other way than pouring of the sewage into the Pawtucket river will have to be adopted. Owners of property on the river will not submit to the making of a nuisance of this river.

4. The health ordinances are quite well enforced.

5. The Board of Aldermen act as a board of Health.

EXTRACTS FROM THE INAUGURAL ADDRESS OF MAYOR A. K. GOODWIN.

Water Works.

I need not take your time upon this department of our city government. An inspection of the reservoirs, the pumping stations, and, in fact, of everything connected with the water works, will convince the most skeptical how thoroughly the work has been done, and how systematically in every particular the work the department has been conducted. The works have cost, up to Dec. 1, 1890, \$1,580,822.70. This seems a large sum, but comparison with the water works of other cities shows the cost per capita to be below the average; while the revenue, over and above the cost for maintenance, is far in excess of that in most, if not all, other cities.

I have been often asked if the construction account of the water works will never be closed. To this question I answer, NO; for I trust, and know, our city will continue to grow and stretch out in all directions. New streets will be demanded, and citizens living thereon will ask that pipes be laid, and that they be supplied with water, both for domestic and fire purposes. This, of course, will add to the construction account; but I firmly believe the revenue from water will, before many years, be sufficient not only to maintain the works, but to pay for any extensions consequent upon increased population and growth of the city.

The receipts from water for the fiscal year ending Nov. 30, 1890, have been as follows: From Pawtucket division, \$66,613.36; from Central and Valley Falls division, \$13,321.81; from Lonsdale division, \$15,768.06; from East Providence division, \$8,254.97; Ashton division, \$596.39; total \$104,554.59.

Of the above sum, \$26,182.79 was paid for maintenance; \$65,509.63 for interest; \$10,000 for the sinking fund, and \$2,045.16 for rebates. It will be seen that the receipts from water paid not only the cost of maintaining the works and the interest upon the entire water debt, but \$10,000 to the sinking fund. There is a balance of \$1,316.94 to the credit of the maintenance account.

The appropriation for construction was \$30,000. The receipts from material sold, etc., were \$34,478.14. Amount expended for extensions, etc., \$33 470.20. The total receipts from water from the starting of the works up to the close of the last fiscal year, Nov. 30, 1890, have been \$836,381.48; of which sum \$244,289.84 has been paid for running expenses, \$509,723.19 for interest, \$32,000 for the sinking fund and \$49,051.51 for rebates, making a total of \$835,064.54.

The Commissioners recommend an appropriation of \$25,000 for extensions, etc., the present year. I trust it will meet your favorable consideration.

Sewers.

Our system of sewerage still continues to grow in favor with the citizens, and I feel quite certain, is well adapted to the needs of the city.

The sewage is now discharged in the Pawtucket river, just below the Main street bridge, and I fear it will not be long before the water will become polluted, and the health of the city endangered thereby. I have called the attention of former Councils to this matter, and, if I mistake not, the retiring Council have taken some steps looking to the disposition and utilization of the sewage. There should be no delay in making investigation, and yet no hasty action should be taken in the adoption of any plan, for it will require no little thought and study to come to a satisfactory conclusion as to the best and most economical way of disposing of the sewage.

The Commissioners make some wise suggestions in their report. The power to make purchases of material used in construction, at any time when, in the judgment of the Commissioners, the market offers the most favorable opportunity, seems to me would be a saving to the city. I should advise, however, before purchases were made beyond present needs, that authority of the Council be first obtained. It is an easy thing to call the Council together to consider matters of such importance.

I have already called attention to defective plumbing, in connection with another subject. The Commissioners recommend an Inspector of Plumbing. I

refer you to their remarks upon the subject, which are very interesting and timely. The report contains information in relation to our system of sewerage, and the work which has been done, also their recommendations as to future needs.

The city has now about 16 miles of sewers. The committee ask for \$7,000 to maintain the same, and for water for flush tanks and for cleaning catch-basins.

Public Parks.

There are in this city but three parks, and they are very small indeed, Wilkinson being the largest. These parks are visited daily, weather permitting, in the summer months, by women, children and invalids, in search of good pure air, so necessary for health; but their small size and the surroundings of some of them, make it quite impossible for one to find any great difference in the quality of air from what is experienced at or near the home, factory or workshop.

None of them are large enough for play-grounds for the children, and can only be used as resting places in which a few of our many citizens may pass a few moments away from the noisy streets and unpleasant home surroundings. For this purpose they are a blessing, and worth a thousand times more than their cost to the city.

What is really needed is a large park, with ample play-grounds, shade trees, and conveniences for out-of-door sport and pastime for women and children, and for those whose limited means will not permit drives in the country, or visits to the more distant summer resorts. We have in our midst such a place. I have before called the attention of our City Councils and citizens to it. The grounds are already in condition for use; trees are in good variety and abundance; finely located; easy to reach from all parts of the city, and to my mind, the most desirable spot for a park in the city. I refer to the Dunnell estate. The Council of 1888, if I mistake not, was in favor of purchasing the property for park purposes if it could be done at a reasonable price. The General Assembly, however, passed an act requiring its submission to the taxpayers. I trust the Council will place the subject before them at as early a time as possible, when fair and full expression can be obtained.

Providing for a public park and a city building at the present time, will without doubt, be considered by some extravagant. It must be remembered, however, that extraordinary expenditures like these do not come often. A city building erected with reference to future needs of the city would be all-sufficient for this and the next generation, to say the least. In other words, we shall never have to provide but one. A public park is a public necessity, and the sooner it is purchased, the better it will be for the city, and for the health of the citizens. The advantages the present time offers for selecting a suitable location should not be overlooked. If Pawtucket continues to grow in the future as it has in the past, it will not be long before desirable grounds within reasonable distance from the centre of the city cannot be obtained.

It is not expected that these extraordinary outlays will be paid for within a single year. In providing for them the future needs of the city are taken into consideration, and consequently the cost is much greater. Why, then should not the future help pay for them? Payment can be made easy by long time bonds at a low rate of interest. In this way the amount to be raised by taxation every

year to meet the payment of the bonds when due, would scarcely be felt by the taxpayers.

THE ANNUAL REPORT OF THE SEWER COMMISSIONERS.—REVIEW OF THE WORK OF THE PAST YEAR AND WHAT IS CONTEMPLATED.

The annual report of the Board of Sewer Commissioners has been compiled. In it they say: We would respectfully call your attention to the necessity of plumbing laws for the city. This necessity is more forcibly brought to our attention as the sewers are extended and house connections made. The Board of Sewer Commissioners has no control over plumbing fixtures or of soil pipes inside of the house above the floors, although our department has in many instances given advice when called upon or when we have discovered work which in our opinion was detrimental to health. There are many tenement houses in this city where there is an entire absence of traps or ventilation for plumbing fixtures. The greater number of these houses are connected with cesspools, although there are some connected with the sewers; these latter are by far the safest, as there is always a ventilated trap in the yard to prevent air from the sewer entering the house, while the former are connected with cesspools, in the majority of cases unventilated except into the house by way of the sink spout. Not alone with the cheaper classes of houses where there is no pretence at plumbing is this inspection needed, but to a greater degree in that class of houses where an attempt is made, without the assistance of a reputable architect, at sanitary plumbing, and where set bowls, bath tubs and water-closets are used. Many of these attempts at plumbing are criminal in their carelessness or ignorance. To this lack of plumbing and ignorance of the simpler laws of plumbing, is directly traceable many of the cases of diphtheria and low forms of fever which have been prevalent in this city, although not to an alarming extent. An inspector should be appointed, one who is a practical man, one who thoroughly understands sanitary plumbing, both practical and theoretical, one who knows the purpose of a trap, how to apply one, how to ventilate and how to prevent siphonage. In our State there are no plumbing laws.

Under orders by the City Council we have commenced the construction of sewers in the Moshassuck river district, and have constructed 39,794 feet of sewers of various sizes, from 8 to 36 inches in diameter. During the year we visited the Massachusetts State Experimental Station at Lawrence, Mass. At this station the treatment of crude sewage is being experimented upon and they have been in progress nearly three years. In regard to experiments tried and results obtained, our engineer has visited the sewage disposal works at East Orange, N. J. The disposal is by chemical precipitation combined with filtration. He has also visited the works at South Framingham, where intermittent downward filtration is used. We with the committee on sewers visited the sewage disposal works at Worcester, Mass., and by the officials in charge were freely informed in regard to the cost and quantities of chemicals used and the cost of constructing, maintaining and operating the works.

As the sewage of the Moshassuck river district must be cared for immediately, we are watching with much interest the success in treatment of sewage during the winter months at South Framingham and at Worcester, as these two cities

are the only places in this part of the country with a climate similar to that of this city where sewage disposal, other than into large bodies of water, has been attempted on a large scale. The only question that has been in our minds has been in regard to the working of the two systems—chemical precipitation and intermittent downward filtration—during a cold winter with snow and ice. The total of all sewers constructed in the city to Dec. 1 is 16.1 miles, 15.237 miles being in the Blackstone river district. There have been put in 15 flush tanks, making the total number 57, four of which have not been put into service. By agreement this department pays the water department \$10 per year for water for each tank, and in our estimate for maintenance of sewers for next year we have estimated \$600 for water for flush tanks. The total number of catch-basins is 341, beside 43 extra gutter inlets. We estimate the cost of cleaning the catch-basins next year at \$2,000. Since Dec. 1, 1889, there have been 184 private drain connections made with the public sewers, connecting 199 dwellings, three manufactories, one church and one pork packing establishment, one schoolhouse and two ward-rooms. The total number of private drain connections with the public sewers is 788, connecting 889 buildings, being at the rate of 55.3 buildings connected per mile of sewer built. We would respectfully recommend that the appropriation for maintenance and care of sewers be the same as last year, \$7000—this to include water for flush tanks and cleaning catch-basins. The unexpended balance of the appropriation for maintenance and care for the year ending Nov. 30 of the present year is \$359.90. There are also 60 catch-basins more to clean this year than last. The total present value of the pipe on hand is \$4657.02.

REPORT OF THE WATER COMMISSIONERS.

To His Honor the Mayor, and Members of the Board of Aldermen and Common Council of the City of Pawtucket :

GENTLEMEN—The Water Commissioners, in making their eleventh annual report, for the year ending December 1st, 1890, would respectfully call your attention to the report of the Superintendent, herewith submitted. It is so full and complete in all its details that little remains for the Commissioners to say as to the work of the department for the year. The amount received for water has not materially changed, and the expenditures have been as economical as proper care and readiness for service would permit. We have had but few fires, but those we have had have demonstrated the great value of our Water Works to the Fire Department and to the City. The contract for a supply of water to East Providence has been extended for a term of ten years at an advanced rate, satisfactory to both the contracting parties. The contract with the Fire District at Central Falls, which expired on the twenty-first of June, 1889, has not yet been renewed. We are confident, however, that when the committee, who now have the matter under consideration, have completed their investigations they will be satisfied that the terms we have offered them are very liberal on our part, and that they can in no other way obtain so satisfactory a supply, and at so little cost. We ask you to appropriate \$25,000 for Construction Account. This is \$5,000 less than the appropriation of last year, but we believe it will be sufficient.

Respectfully submitted by

LUCIUS B. DARLING,	} Water Commissioners.
ROBERT D. MASON,	
OLNEY ARNOLD,	

Pawtucket, December, 1890.

EXTRACTS FROM THE REPORT OF THE SUPERINTENDENT OF THE WATER WORKS.

For the past year no unusual expenditures have been required. The usual extension of mains have been made, as can be seen by referring to that part of the report; also the increase in services and hydrants. The efficiency of the latter has been fully maintained as the demand is called for; this I consider one of the most important parts of our works, and when we take into consideration the effectiveness of the same, we ought to feel satisfied with the results. That no city in the country has a better fire protection is an undisputed fact, and is admitted by all who are conversant with the situation.

There has been a coal-shed erected at Station No. 3, whereby the coal can be taken direct from the cars and a large saving made in the cost of coal. The retaining walls to the highway have been completed and the banks properly graded, and everything in and around the Station is complete.

The engine is working with the same degree of ability that has marked the No. 1 engine, as will be seen by the Engineer's report.

There has been no material change in the other Stations or at the reservoirs, except the usual care required. There will be needed \$25,000 for general construction for the purpose of extending the mains and services, meters, etc.

During the year the works have been extended by mains, etc., as follows:

For the year 7,751 feet.

Total length of mains, to date, 108 miles.

Hydrants have been set as follows:

In Pawtucket.....	10
In East Providence.....	4

Total for year 14, added to 807 as per last year's report, making a total of 821 on the works.

Applications.

Applications for water have been made as follows:

In Pawtucket.....	167
In Central Falls Division.....	45
In Lonsdale and Valley Falls Division.....	19
In East Providence Division.....	57
In Ashton Division.....	6

Total for year..... 294

Services.

165 services have been made in Pawtucket.

41 " " " " Central Falls Division.

19 " " " " Lonsdale and Valley Falls Division.

31 services have been made in East Providence Division.

5 " " " " Ashton Division.

261

5061 services in use as per last year's report.

5322 number of services now in use.

Meters.

Two hundred and sixty-five services have been supplied with meters as follows:

171 in Pawtucket.

15 " Lonsdale and Valley Falls Division.

29 " East Providence Division.

46 " Central Falls Division.

4 " Ashton Division.

265

To the above add those in use as per last year's report, 3,274, making a total of 3,539. Deduct from above 11 services which have been discontinued, leaving 3,528 metered services in use.

Receipts.

For water in Pawtucket.....	\$66,613 36
For water in Central Falls Division.....	13,321 81
For water in Lonsdale and Valley Falls Division.....	15,768 06
For water in East Providence Division	8,254 97
For water in Ashton Division.....	596 39
	<hr/>
	\$104,554 59
Amount received for stock and labor performed	3,478 14
	<hr/>
	\$108,032 73

The above amount has been paid to the City Treasurer, and the Superintendent has his receipts for the same.

Recapitulation of Receipts.

Received for water from public use.....	\$90,542 83
" " " " hydrants.....	8,560 00
" " " " Cumberland hydrants.....	1,950 00
" " " " Central Falls hydrants	
" " " " Watchemoket Fire District.	1,120 00
" " " " private hydrants.....	620 00
" " " " watering streets	335 00
" " " " drinking fountains.....	540 00

Received for water from builder's permits.....	656 76
“ “ “ “ Prospect Hill hydrants.....	200 00
	<hr/>
	\$104,554 59
Balance on hand December 1st, 1889.....	499 93
	<hr/>
	\$105,054 52

The receipts for water for the past year have not increased as in former years. The decrease is accounted for by the shutting down of the Bridge Mill Paper Co., and from other large manufacturers using river water to a very large extent, or having driven wells. It will also be noticed that we have pumped about 100,000,000 gallons less water this year than last.

Receipts for Water.

From Oct. 1, 1878 to Dec. 1, 1890 \$836,381 48

Increasing yearly from about \$16,000 to \$104,554 per annum.

Of this amount \$509,723 19 has been transferred to the payment of interest, \$32,000 to the sinking fund, \$49,051.51 paid in rebates, and \$244,289.84 has been expended for maintenance. A balance of \$1,316.94 remains in the treasury.

Whole cost of works to date.....	\$1,580,822 70
Bonded debt.....	\$ 500,000 00 at 5 per cent.
“ “	1,000,000 00 “ 4 “ “
Notes out.....	41,662 70
Premium on 4 per cent bonds.....	39,160 00

Per City Treasurer's report.....	\$1,580,822 70
Amount of sinking fund due to the water works account.....	\$290,000 00

I will take a few of the most important items from the engineer's report, as shown in the table, so they will be more noticeable.

The total number of gallons pumped during the year is 1,174,042,766.

Average daily consumption, 3,216,555.

Total cost of coal, oil, waste, gas, (repairs on engines and boilers) and engineers' and firemen's salaries for the year is \$12,476.73.

The following tables of the pumping stations have been compiled by Mr. John H. Walker, chief engineer, and are annexed to and made part of my report.

Record of Observations at No. 1 Station, for the Year Ending November 30, 1890.

Number of days pumping.....	138
Total pumping time per month.....	1,837.32
Average pumping time per day.....	13.00
Total revolutions per month.....	5,279,195
Average revolutions per minute.....	47.94

Coal—

Starting fires	55,360
Banking.....	32,610
Heating building.....	24,962
Pumping.....	378,217
Total.....	491,149
Total number of gallons pumped per month.....	217,640,994
Average number of gallons pumped per pounds of coal consumed, excluding heating when not pumping.....	443.12
Average number of gallons raised 100 feet per pound of coal consumed.....	1,189.24
Average head against pump in feet. No allowance for friction in suction	268.38
Average duty in pounds of water raised 1 foot high per 100 pounds of coal; calculated on total coal used for all purposes; no deduction for ashes and cinders.....	101,229,000
Average duty in pounds of water raised 1 foot high per 100 pounds of coal; calculated on total coal used for starting, pumping, banking; no deduction for ashes or cinders.....	106,649,000

*Record of Observations at No. 2 Station, Steam Power, for the Year Ending
November 30, 1890. (Five Months.)*

Number of days pumping	22
Total pumping time per month.....	245.20
Average pumping time per day.....	11.18
Total revolutions per month.....	658,537
Average revolutions per minute	44.73
Coal.....	81,278
Average head against pump in feet. No allowance for friction in suction	273.80
Total number of gallons pumped in each month.....	27,046,114
Number of days water wheels run in connection with engine.....	2½
Number of pumps used.....	4

*Record of Observations at No. 2 Station, Water Power, for the Year Ending
November 30, 1890.*

Number of days pumping.....	287
Total pumping time per month.....	3,292.40
Average time per day.....	11.29
Total revolutions per month.....	6,495,873
Average revolutions per minute.....	32.88
Average head against pump in feet.....	270.00
Total number of gallons pumped per month....	266,785,504
Pea coal used to heat building	26,900
Egg coal used to heat building.....	46,571
Number of pumps used.....	4

Record of Observations at No. 3 Station, for the Year Ending November 30, 1890.

Number of days pumping.....	234
Average pumping time per day.....	11.53
Total pumping time per month.....	2,780.48
Total revolutions per month.....	7,976,057
Average revolutions per minute.....	47 80
Coal—	
Starting Fires.....	238,121
Banking.....	75,250
Heating Building.....	67,785
Pumping.....	1,119,565
Total.....	1,500,721
Total number of gallons pumped per month.....	662,571.054
Average number of gallons pumped per pounds of coal consumed, excluding heating when not pumping.....	462.38
Average number of gallons raised 100 feet per pound of coal consumed	1,288.69
Average head against pump in feet. No allowance for friction in suction.....	278.71
Average duty in pounds of water raised 1 foot high, per 100 lbs. of coal; calculated on total coal used for all purposes; no deduction for ashes and cinders.....	104,700,000
Average duty in lbs. of water raised 1 foot high per 100 lbs. of coal; calculated on total coal used for starting, pumping, banking; no deduction for ashes or cinders.....	109,643,073

Table showing Amount of Rain and Melted Snow for the Year Ending November 30, 1890.

	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	
1					†0.17	0.13			0.29				1
2		*		0.54				*					2
3	‡0.13		0.10	†0.75				*					3
4			0.08		0.75		0.40	*			1.37		4
5	0.16	0.03		0.02				*		*			5
6		0.02		†0.35		2.86							6
7					0.22		1.04	0.03	0.36	1.11			7
8			‡1.51			0.07					0.53		8
9	0.84	*			0.65				0.41	0.06			9
10		†0.19							0.21			0.02	10
11	0.06		†0.01			0.36	0.01				0.05		11
12		0.29		0.21								0.22	12
13	0.04								*				13
14			0.24			*							14
15	0.56			‡0.66		0.53	1.34	*			0.54		15
16		1.30										0.17	16
17								*					17
18			0.18							3.35		0.33	18
19	0.53			†0.67			*	0.03					19
20		0.10	‡0.65			0.96		*	0.54		1.14		20
21		†*		0.08			*						21
22	0.04								0.09	*		†*	22
23		†0.08		1.31					0.28			†*	23
24							*						24
25	0.42				0.18		0.05				3.32		25
26	0.04		0.56	0.27				0.97					26
27		‡0.72				1.30			0.97	0.46	0.03		27
28					1.83	0.24							28
29	0.10			‡0.37				0.22					29
30		0.26							*		0.58		30
31		†0.02		†*									31
	2.92	3.01	3.33	5.23	3.80	6.45	2.84	1.25	3.13	4.98	9.17	0.74	

Total Rain and Melted Snow, 46.895 inches.

Total depth of Snow, 28.87 inches.

* Too small to measure.

† Snow.

‡ Snow and Rain.

In conclusion I wish to say that the employees still maintain that interest in the works which they have displayed (many of them) since they were built.

Thanking His Honor the Mayor, the City Council, and the Honorable Board of Water Commissioners, for courtesies extended, I remain, respectfully yours,

EDWIN DARLING, *Superintendent.*

PROVIDENCE CITY.

1. The city authorities have taken action upon many measures having relation to the public health. See below.

2. In regard to the extension of water service for general use, see extracts

from the reports of the City Engineer and Commissioner of Public Works, appended.

3. Connection with sewers has been quite largely increased in numbers, and main and lateral sewers extended. See reports appended.

4. The sanitary ordinances of the city have been quite well enforced.

5. The board of aldermen is the city board of health.

6. Superintendent of health, Dr. C. V. Chapin.

7. Gratuitous vaccination is furnished every year.

8. Undertakers are required to make returns of death before the funeral of any deceased person.

EXTRACT FROM INAUGURAL ADDRESS OF MAYOR CHAS. SYDNEY SMITH.

Department of Public Works.

This department has in charge the highways, water works, sewage works, bridges, and engineering. The Commissioner reports that there are over 173 miles of streets to be cared for, of which 20 miles are paved with cobble, granite blocks and asphalt, 110 miles macadamized, and 43.5 miles neither macadamized nor paved; that special attention has been given to the care and reconstruction of the streets in the centre of the city, and that efforts have been made to improve the character of all the more imperfect of the highways; that to do this more rapidly than has been done in the past has required a larger expenditure than formerly, and that even a greater expenditure might profitably be made until the streets are completely put in order. All reasonable and necessary expenditures for the improvement of the streets will receive my sanction.

A change of plan in sweeping streets is reported as having been made, by which all such work is done in the night, resulting in great relief from annoyance to those using them and a considerable economy in the cost, and that the practice of watering streets for the better maintenance of the macadamized roadways has been tried to a limited extent with excellent results. The suggestion that this practice should be extended meets with my approval.

During the past year about 8 1-2 miles of water pipes have been laid, making the total, including those in adjoining towns, about 226 miles; while the demand for water pipes has been greater than during any of several preceding years. The pumping engines have been overhauled and repaired, and this entire branch of the public works is reported to be in good and satisfactory working order.

The continued increase of income from water rents has induced the department to make a reduction in the rates therefor, which takes effect the first of the present month.

During the year about four and a quarter miles of new sewers have been constructed, making the total length, exclusive of the improved sewerage system, about 67 1-4 miles.

The completion of the sewer in West Exchange street has furnished an outlet for a large section heretofore deprived of proper drainage, and a considerable portion of the sewers built have been those having their outlet through those in West Exchange and Dorrance streets.

Contracts have been awarded for the building of a large portion of the main sewer, which will drain what is known as the Elmwood district, extending from High street, near Dexter Training Ground, to Field's Point, and comprising about 1,600 acres. The sewer is let from Potter's avenue to the intersection of Allen's avenue, and from the proposed location of the tanks to the submerged pipes at the outlet. This sewer, when completed, will form an outlet for the drainage of a large area which heretofore has had no sewerage facilities.

Fire Escapes.

The placing of fire escapes upon all buildings where the law requires them, should not be allowed to be neglected. Owners of property ought not to be permitted to hazard the lives of the occupants of their buildings for the lack of proper means of exit in case of an emergency, and the reason, which I have heard for the failure in some cases to provide fire escapes on the ground that the manufacturers of those appliances in this city are unable, from press of work, to execute additional orders, should not be accepted as a proper excuse for violation of the law requiring their erection. Whoever is charged with the responsibility of enforcing existing laws governing fire escapes will receive my support in demanding that this security to the general public shall be fully provided.

EXTRACTS FROM THE REPORTS OF THE COMMISSIONER OF PUBLIC WORKS AND CITY ENGINEER.

Highways.

Referring to the work performed during the season of 1890, I have to report that at the opening of the year there existed a list of thirty-four streets to be built. During the year this list was augmented by fifty more streets, by order of the Council, making a total of eighty-four streets. Of this number fifteen were built during the year from the regular highway appropriation, and thirty-two from the special appropriation.

Street Sweeping and Cleaning.

The system of street cleaning, which was inaugurated last year, has worked well. The streets are cleaned in the night, the work being entirely completed before daylight. Former annoyances to the public, of dust, interruption and confusion, have by this process been abolished. Large economy has resulted, and at the same time the area swept by the machines has been greatly extended.

The system of day sweeping, by which the streets are kept free from dust, mud, etc., seems to have been appreciated by the public, and the department is continually receiving expressions of approval, from not only the citizens, but from residents of other cities. The area swept by the day gangs has been increased quite one hundred per cent., at but small additional cost. This has been accomplished by discharging the incompetent and employing only sober, industrious men.

The experiment of watering main thoroughfares have been made to a limited extent, as a measure of maintenance. It is an undoubted success. As an in-

stance in point: Gaspee street, over which hundreds of heavy teams constantly pass, required hoeing, with a large gang of men, every two weeks. It was watered during the latter half of the season, and nothing further was required from the street gangs.

Sewers.

During the year about $4\frac{1}{4}$ miles of new sewers have been constructed, making the total length, exclusive of the improved sewerage system, about $67\frac{1}{4}$ miles.

The completion of the sewer in West Exchange street has furnished an outlet for a large section heretofore deprived of proper drainage, and a considerable portion of the sewers built have been those finding their outlet through the sewers in West Exchange and Dorrance streets.

A new portable sewer trap has been invented in the Public Works Department, which promises results far beyond the apparent insignificance of the article itself. There are over 1,700 catch-basins with old-fashioned traps. These old traps can be replaced by the new traps at a cost of less than four thousand dollars, and a saving effected in the sewer service of nearly five thousand dollars per year. About thirty are in use and their operation entirely warrants this statement.

Improved Sewerage System.

Contracts were let for six sections of the Elmwood division of the new sewerage system, three of which have been worked. Section 1 is nearly completed, and Section 5 is in a forward state. Section 8, near Elmwood, has proved difficult and dangerous, as bad quicksand has been encountered, which has severely taxed the mechanical resources of the contractors. Estimates for the remaining sections of the Elmwood division are nearly prepared and proposals for same will be advertised early in January. The coming year should see this important work completed.

Water Works.

The Water Department is in a flourishing condition. The increase of water-takers has been larger than in any year since 1878. To meet this increased demand for water has required 8.51 miles of pipe to be laid, or 50 per cent. more than the usual quantity. To lay this extra quantity has required a corresponding addition to the force in the water service. The increase of water-takers has produced a surplus of \$25,000 over interest and expenses. In view of this increase of income, and to induce a more liberal use of water, as well as to encourage the introduction of new industries, the department, with the approval of the city council, decided upon a reduction of the water rates, which goes into effect January 1st, 1891. It is expected that a deficiency in the receipts to pay maintenance and interest will result for a short time; but a liberal policy, for the city's true interest, demands that cheap water shall be furnished, and it is a fair presumption that the result of that policy will be to render the period brief before the water department will again be upon a self-sustaining basis.

The steam plant of the water works has been thoroughly overhauled and is working well.

The buildings at the pumping stations have been put in order and are being painted. The iron railing around the Hope reservoir has been straightened, the heavy granite gate-posts reset, and the iron fence and railing been thoroughly scraped of rust and painted.

Coal Burning.

Records kept at the Pettaconset pumping-station justify the expectation that was entertained that the new system of coal-burning, which was inaugurated last year, would result in a large economy. The saving in cost for fuel, for the year, over the service of former years, was \$2,443. A still greater saving would result if proper arrangements were made to deliver coal directly into the coal houses from the cars.

Defilement of the Pawtuxet.

The department has taken active measures throughout the year to prevent defilement of the Pawtuxet and its tributaries. The greater proportion of nuisances have been removed, and the department has had the active co-operation of many of the mill corporations bordering upon the stream. There are several manufacturing establishments, however, which are serious offenders against the laws governing this important matter. For years the proprietors have been admonished, but nothing has resulted beyond assurances that the nuisances complained of should cease, when they discovered a suitable process for disposal of their wastes. The limits of tolerance have been reached, and vigorous measures must be taken against these parties if the citizens of Providence wish to have pure water for themselves and their children, in return for the millions of money spent by the citizens for that purpose. The Commissioner of Public Works is amply prepared to prove that there is something more than sentiment involved in this matter.

Water Works, Hydrants, Pipe, etc.

36 hydrants have been set during the year.

The total number of hydrants to December 31, 1890, is thirteen hundred and fifty-one, including forty-nine in the town of Johnston. This number does not include twelve post hydrants which are set in the town of Cranston.

Following is a statement of the length of each size of water pipe in the ground January 1, 1891, considered as mains:

SIZE OF PIPE.	LENGTH IN FEET.	LENGTH IN MILES.
36 inch.....	10,084.	1.9098
30 "	59,656.66	11.2996
24 "	43,461.09	8.2313
20 "	9,626.59	1.8232
16 "	31,746.36	6.0126
12 "	69,179.23	13.1021
10 "	14,476.04	2.7417
8 "	171,614.89	32.5028
6 "	785,965.10	148.8570
Total.....	1,195,809.96	226.4791

3996.15 feet of 4-inch pipe, not included in the above, are laid at the pipe yard, Roger Williams Park and North Burial Ground.

Included in the above table are the following approximate lengths of pipe which are laid in adjoining towns:

CRANSTON.		JOHNSTON.		NORTH PROVIDENCE.		PAWTUCKET.		WARWICK.	
Size of Pipe.	Length in Miles.	Size of Pipe.	Length in Miles.	Size of Pipe.	Length in Miles.	Size of Pipe.	Length in Miles.	Size of Pipe.	Length in Miles.
36 inch.	1.9098	30 inch.	.0102	30 inch.	.0037	12 inch.	.0003	6 inch.	.3398
30 "	4.5134	12 "	.0451	24 "	.5386				
24 "	.1307	8 "	2.6789	8 "	.3891				
12 "	1.7678	6 "	6.6163	6 "	.1430				
8 "	2.6337								
6 "	5.0305								

The approximate cost of laying water pipe, with appurtenances, except hydrants, and including iron at \$30 per long ton, is:

For 4 inch.....	\$0.498 per foot.
" 6 ".....	0.725 " "
" 8 ".....	0.973 " "
" 10 ".....	1.244 " "
" 12 ".....	1.593 " "
" 16 ".....	2.403 " "
" 20 ".....	3.359 " "
" 24 ".....	4.454 " "
" 30 ".....	6.348 " "
" 36 ".....	8.540 " "

The cost of the water works construction from November 8, 1869, to January, 1, 1891, is \$5,573,497.28, upon which there has been a revenue for water sold of \$4,732,671.49.

The annual and the average daily and monthly consumption of water, including waste and leakage, during the year, is shown by the following table:

Consumption per annum.....	2,461,212,325
Average monthly consumption.....	205,101,027
Average daily consumption per month.....	
Average daily consumption for the year.....	6,743,047

The amount of water consumed, shown in the above table, includes the supplying of about 19.6 miles of distribution pipes, located in adjoining towns, as well as supplying the greater part of the State Institutions at Cranston.

Two hundred and fifty-three construction plans for laying water pipe have been made. Six hundred and fifty-seven service pipes have been sized. Estimates for payment for water pipe purchased under contract have been made. The quarterly, monthly and daily consumption of water of the city has been calculated. The water pipe that has been laid, including gates and hydrants, has been located, recorded and plotted. Elevator and fire supplies have been located, recorded and plotted. Tables relative to the cost of laying water pipe have been made. Tests have been made to ascertain if there was any leakage of water from Hope and Sockanosset Reservoirs. The drainage areas of the Pawtuxet River, the Blackstone River, the Ten-Mile River, the Woonasquatucket River, the Moshassuck River, the Providence River and the Taunton River have been computed from the new maps of the United States Geological Survey. Tables giving the loss of head due to friction of water flowing in pipes with different velocities have been calculated, and much other work of a miscellaneous nature performed.

Sewers.

The following is a statement of the total lengths of sewers constructed to January 1, 1891:

	Constructed previous to 1890.	Constructed in 1890.	Totals.
Total length in feet.....	332,782.95	22,984.39	355,767.34
" " " miles.....	63.027	4.353+	67.380

As will be seen from the preceding table, 4.353 miles of sewers have been built the past year, 3.323 miles of which were of pipe, and 1.030 miles were of brick, making in all 46.860 miles of pipe and 20,520 miles of brick sewer a total length of 67.380 miles of sewer built to date.

The average contract cost of labor, per foot, on the different sizes of sewers, built during the last three years, has been as follows:

8 inch pipe in basin connections.....	.63	20x30 inch single course brick sewer.....	\$2.15
12 " " sewer	\$1.20	22x33 " " " " "	2.60
15 " " "	1.34	24x36 " " " " "	2.30
16 " single course brick sewer	1.70	26x39 " double " " " "	2.60
18 " " " " "	2.05	28x42 " " " " "	3.00
20 " " " " "	2.03	36x54 " " " " "	2.65
22 " " " " "	1.50	38x57 " " " " "	3.67
24 " " " " "	2.55	40x60 " " " " "	5.47
48 " double " " "	3.25	Rock excavation, per cubic yard.....	4.00

The average cut on twelve-inch and fifteen-inch pipe sewers was about twelve feet.

The average cut on brick sewers was from thirteen to fifteen feet.

The average cut on 40 x 60 inch brick sewers was about twenty-four feet.

Excavation mostly sand and gravel.

There have been built and connected with the sewers constructed the past year, 103 catch-basins, 50 extra inlets and 182 manholes.

The total number of catch-basins in use January 1, 1891, is 2,255.

The total number of manholes connected with the present system is 3,289.

The number of new house connections made in 1890 was 401, and 183 permits were given to extend drains already laid.

The total number of house connections made with the sewers, January 1, 1891, is 5,996.

WOONSOCKET.

1. Considerable work for the promotion of public health, has been contemplated by the town authorities. The work of building sewers has been contemplated but not much headway has been made.

2. Water mains have been extended; some 15,000 persons supplied.

3. No sewers yet completed. See Inaugural Address of Mayor D. B. Pond.

4. Nothing new the past year. Old sanitary ordinances fairly well enforced.

5. The board of aldermen the legal board of health.

6. Dr. George W. Jenckes, health officer.

7. No gratuitous vaccination provided during the past year.

EXTRACTS FROM INAUGURAL ADDRESS OF MAYOR DANIEL B. POND.

Water Works.

I have alluded to the probable increase in the requirements of the water works construction account. I have been unable to obtain the report of this department for perusal before going to print with my message, but from what has already been called for, and a general knowledge of the needs of the department, obtained by personal inspection and indirect information, I believe that not far from \$100,000 will shortly be required in this department. The sums now asked for, together with what has already been appropriated, will amount to about \$50,000. I may recur to this subject at a future time in a special communication, if deemed necessary.

City Hall and Public Parks.

In his last annual message the Mayor recommended that an act of the Legislature be obtained giving the city authority to take the necessary land for one or more public parks and for a City Hall, under the rights of eminent domain.

The writer, at the May session of the Legislature, 1890, in co-operation with his associates in the General Assembly, procured the passage of an act covering this ground, and, subsequently, as Mayor, was instrumental in getting two joint special committees appointed, to whom these subjects were referred. The committees immediately took the subjects in hand and made conscientious efforts to effect the objects desired. The committee on City Hall, after a careful consideration of the subject, and after a public hearing, made a report to the Common Council recommending the High street site, and making suggestions for further procedure. The report was received by the Council and laid upon the table, without debate, where it has since continued to slumber.

With the result before him, the Mayor, as chairman of the committee, felt that it would be useless to push forward the matter of public parks, and that matter has been left in statu quo. Now, that new blood has been infused into the City Council, he hopes that further progress may be made, and he takes this occasion to renew the recommendations contained in his communications to the City Council of the past year as to these matters.

Sewerage.

The subject of establishing a system of sewerage for the city is, perhaps, as important as anything that may come before you. The Mayor, in his last annual message, recommended the appointment of a joint special committee to consider this subject. Authority was obtained from the Grand Assembly authorizing the city to expend a sum not exceeding \$2,500 in this direction.

The Mayor devoted much time and thought to this matter, and was instrumental in obtaining a proposition from competent engineers to do the preliminary work needed, for what he believed to be a moderate compensation. Having proceeded so far, the whole matter was put into the hands of the joint committee on sewers. It was not long before the Mayor discovered that some one seemed to have a "pull" upon the chairman and a majority of that committee. The committee failed to take action upon the favorable proposition placed in their hands.

Subsequently the chairman of the committee presented the Mayor a proposal to engage an expert from Worcester to look over the ground at a cost of \$25 per day for three or four days.

Desiring progress, rather than to insist upon methods, the Mayor agreed to the proposal, provided two experts should be employed, whose work and reports should be separate. The Mayor understands from the chairman of the committee that a second expert has never been asked to do any work, and what the first one has done he is unable to ascertain.

Every intelligent citizen will admit the absolute and imperative need of establishing a system of sewerage in the city, and as it will take some years, doubtless, before the whole city can be sewered, it is the more important that a beginning should be made.

Certain preliminary work should have been done so that legislative action could be had this winter. It has not been done, and it remains for you to take up the subject, and to carry it forward. I desire to earnestly press upon you the importance of the subject. The difficulty and expense of disposing of the sewage of the city is constantly increasing, and sewerage is needed as a matter of economy and convenience. But it is especially necessary in the interest of the health of our citizens. A good system of sewerage in a city will conserve the health of the city and diminish the death rate. According to the last published report of the State Board of Health, Woonsocket's death rate is 22.1 per 1,000 inhabitants. There are but four towns in the whole State which have a higher death rate. This statement alone ought to be sufficient to incite us to prompt and vigorous action. No such temporary and impracticable scheme as that recommended by the health officer, however correct in theory, when applied upon a small scale, viz., imperiously sealing up the sides and bottoms of all cesspools and vaults, will answer in this city. A thorough system of sewerage is the only thing that will answer our needs and demands.

Until this is accomplished the health officer can find enough to do to earn his full salary, and more, provided he is intelligent, practical and observing, and has the confidence of the public, which last requisite is quite important. He need not, necessarily, be a physician. It has been suggested that a Board of three health officers would be preferable to a single officer. I leave this subject to your own good judgments without recommendations.

WASHINGTON COUNTY.

CHARLESTOWN.

1. Nothing new for the promotion of public health.
2. No water service in town.
3. No public sewers.
4. Nothing new for any sanitary purpose. See ordinance in Report of State Board of Health, 1887.
5. Board of health, the town council.

6. Health officer, A. A. Saunders, M. D.
7. Gratuitous vaccination has not been provided during the past year.
8. Undertakers have been more prompt for the past year than usual.

G. Cross, *Town Clerk.*

EXETER.

1. No sanitary work by the town.
2. No water service for general use.
3. No public sewers.
4. None for sanitary purposes.
5. Board of health, the town council.
6. Hon. Town Council, the health officers.
7. No gratuitous vaccination provided during the past year.
8. Undertakers do not promptly send in their returns of death.

J. H. EDWARDS, *Town Clerk.*

HOPKINTON.

1. Nothing new in the line of work for the promotion of public health, by the town authorities during the year.
2. No water service for general use.
3. No public sewers.
4. No new ordinances in abatement of nuisances.
5. Board of health, the town council.
6. Health officers: Israel Gates, P. O., Canonchet.
7. No gratuitous vaccination provided during the past year.
8. (No reply).

E. R. ALLEN, *Town Clerk.*

NARRAGANSETT.

1. The principal work for the promotion of public health, contemplated by the district authorities, is the sewer system now in course of construction.
2. No large extension of water service for general use.
3. The aggregate length of sewers in course of construction is about $1\frac{1}{2}$ miles.
4. Nothing new except as above.
5. Board of health, the district council.
6. Abbott L. McIntosh, health officer.
7. No gratuitous vaccination has been provided during the past year.
8. (No reply.)

W. H. CASWELL, *District Clerk.*

NORTH KINGSTOWN.

1. (Not stated.)
2. (Not reported.)
3. No public sewerage.
4. Sanitary ordinances same as last year.
5. Board of health, the town council.
6. Thomas W. Peirce, health officer.
7. Gratuitous vaccination was not provided during the past year.
8. Undertakers have more promptly sent in their returns of death.

C. T. CROMBE, *Town Clerk.*

RICHMOND.

1. Nothing unusual for the promotion of public health, acted upon, by the town authorities during the year.
2. No water service for general use.
3. No public sewerage.
4. No new ordinances.
5. Board of health, the town council.
6. A. H. Eccleston, M. D., health officer.
7. No gratuitous vaccination provided during the past year.
8. Undertakers have more promptly sent in their returns of death, more so this, than in former years.

H. P. CLARKE, *Town Clerk.*

SOUTH KINGSTOWN.

1. No particular work for the promotion of public health, contemplated by the town authorities during the year.
2. Water service for general use has been extended by the Wakefield Water Co., Capt. E. A. Waterhouse, Supt., N. Pier, R. I.
3. No public sewerage.
4. There were no new ordinances in abatement of nuisances; old ordinances sufficient.
5. Board of health, the town council.
6. John R. Wilcox, health officer, Kingston.
7. Gratuitous vaccination was provided during the past year. 215 school children.
8. Undertakers have promptly sent in their returns of death.

H. B. PERRY, *Town Clerk.*

WESTERLY.

1. No work for the promotion of public health, contemplated by the town authorities during the year.
2. There has been some extension of water service for general use, by the Westerly Water Works Co.
3. No sewers.
4. No new ordinances.
5. Board of health, the town council.
6. H. W. Rose, M. D., superintendent of health.
7. No gratuitous vaccination provided during the past year.
8. Undertakers have promptly sent in their returns of death.

W. HONSEY, *Town Clerk.*

REPORTS OF
HEALTH OFFICERS.

1890.



CIRCULAR TO HEALTH OFFICERS.

In order to ascertain what degree of interest was taken in the work of sanitary inspection, and what had been accomplished in the different towns by the Health Officers of the same in any line of sanitary work during 1890, the following circular was sent to each at the close of the year:

CIRCULAR No. 106.

OFFICE OF SECRETARY OF THE STATE BOARD OF HEALTH.

PROVIDENCE, Dec. 26, 1890.

To the Health Officer of

DEAR SIR:—An important feature of the Annual Reports of the Rhode Island State Board of Health is that of giving a connected history of the occurrence of contagious and epidemic diseases from year to year, as they may have prevailed in the different towns, whether epidemically or in a less degree, together with the location in the town (village or otherwise), the season of the year, measures taken for restriction, kinds of inspections made, &c.

If the proportion of the **fatal** cases to the **whole number** of cases of the same **disease** could at all times be given, the value of such reports would be very much enhanced. Such proportion can be ascertained only in such towns as by *town ordinance* require physicians to report all cases of such diseases as come within their charge.

An approximate proportion can, however, be given, after the subsidence of the disease, by inquiry of persons living in the immediate neighborhood of the prevalence of such disease as to the number of the sick, or by house to house visitation where the sickness occurred, with same inquiry, and by the comparison of the deaths with recoveries as so ascertained.

Another feature of the Reports is a yearly record of the sanitary improvements made in the towns, in relation to water supply, drainage, abatement of nuisances, better methods of heating and ventilating public buildings, and such **new ordinances** as may have been adopted, having in view the improvement of the public health, the data for which is mainly obtained from the town and city clerks.

It is for the purpose of ascertaining *additional* and *supplementary* information that the questions in the inclosed circular are sent to the various Health Officers of the State.

If, therefore, you will have the kindness to reply to the questions in the said circular, according to the best knowledge you have been able to obtain, and forward in the enclosed stamped envelope, you will favor one of the most important interests of the State, and greatly oblige,

Yours truly,

CHAS. H. FISHER,

Sec. State Board of Health.

P. S.—In the replies on the blank circular of questions, in relation to the extent or degree of prevalence of any disease, the following signs may be used:

The star (*) preceding the name of any disease will indicate an epidemic prevalence; the sign plus (+), a large prevalence; and the sign equals (=), a moderate prevalence.

To Health Officers who are not physicians, it may be said that the term **epidemic**, within the meaning of the questions proposed, is the prevalence of some disease to the extent of one or more persons affected with the disease to every five or six persons living in adjacent tenements or in the near neighborhood, or a smaller proportion, not less than one case of the disease in every ten or twelve of the population, extending over a large area of territory. One sick in every twelve to sixteen persons might be called a **large prevalence**, and one sick in every twenty to twenty-five, a **moderate prevalence**. The number of cases of any one disease may have to be estimated, but make them as nearly correct as possible.

C. H. F.

CIRCULAR No. 107.

DEAR SIR:—Replies to the following questions, as suggested in the accompanying circular (No. 106), are respectfully solicited; said replies to be made on this circular, following each question:

1. Name of Town.
2. Name of Health Officer.

3. Have there been, within your knowledge, any epidemics, or any large prevalence of contagious or infectious diseases in your town during 1890? If so, of what disease or diseases? in what locality or localities? how many of each disease? * and in what months of the year?

*According to the best knowledge obtainable.

Diseases.	Locality.	No. of Cases.	No. of Deaths.	Months in which they occurred.

4. Was isolation maintained or attempted? *

5. What proportion of the sick, if any, were isolated?

6. Was any inspection of premises made, where sickness prevailed, as to the sanitary condition of the cellars, pantries, sinks, sink-drains, water-closets, if any, cesspools, out-house privies, distance of wells from accumulations of filth, etc., etc.? If so, please give a general statement as to whether they were in good sanitary conditions or not, or if any thing or place was unusually unsanitary, give a full description. Or if the cause of any outbreak of disease was found, please state what?

7. Did you make any sanitary inspections during 1890, by order of the town council or from your own option? If so, what were they and how made?

8. Do you know of any location in your town that seems to be particularly unhealthy to any considerable number of persons? If so, and the cause is suspected, can such cause be removed at any reasonable expense?

9. Do you report to your town council nuisances dangerous to the public health, or unsanitary premises within your knowledge; or of buildings unsafe for occupants in case of fire? (See Chapter 495, Section 6, Public Laws.)

10. Have you knowledge that any serious disease of domestic animals has largely prevailed in your town during the year? If so, what disease or diseases, and in what locality?

Have you a copy of the "Manual for the Health Officers of Rhode Island" at hand. If not, one will be forwarded immediately, or more, if desired.

*According to the best knowledge obtainable.

RETURNS OF HEALTH OFFICERS.

BRISTOL COUNTY.

1. BARRINGTON.

2. Health Officers, Town Council.

3. Have not known of any epidemics, or any large prevalence of contagious or infectious diseases in town during 1890.

There have been two cases of scarlet fever in two different parts of the town, one of a girl of seventeen and one a girl of six. Both recovered.

I do not think the family used discretion in appearing in public during the presence of the disease.

4. No isolation.

No inspection of premises made, where sickness prevailed as to the sanitary condition.

5. No sanitary inspections made during 1890 by order of the town council.

6. No location in town that seems to be particularly unhealthy to any considerable number of persons.

8. No serious disease of domestic animals has prevailed in town during the year?

1. BRISTOL.

2. Health Officer, Geo. H. Peck.

3. The following contagious or infectious diseases prevailed in town during 1890:

Measles, entire town, 334 cases, no deaths, January, February, March and May. — Scarlet fever, suburbs, 11 cases, no deaths, February, June, July, August, September, October, November and December. — Typhoid fever, in different parts of town, 6 cases, no deaths, June, August and September.

4. Isolation was maintained.

5. All were isolated, that were reported, except measles.

6. Where typhoid fever occurred in one case, cesspool was full, and backed into the house and was probably the cause; in scarlet fever cases surroundings in fair condition, most of them being on the outskirts of town.

7. Sanitary inspections were made during 1890, from my own option, have examined cesspools and vaults and found many of them in very bad condition, and have had them put in as good condition as possible.

8. No location that seems to be particularly unhealthy.

9. I report to the town council nuisances dangerous to the public health; we have an Inspector of Buildings.

No unusual disease of domestic animals has prevailed.

1. WARREN.

2. Health Officer, Michael B. Conroy.

3. There have been within my knowledge, no epidemics, or any large prevalence of any contagious or infectious diseases in town during 1890.

6. I was not called upon to investigate any premises where disease prevailed, I did examine other premises and ordered abatement of nuisances such as sink-drains and privies.

7. Sanitary inspections were made during 1890. Several from order of town council and several from my own option—sink-drains and privies principally—a private sewer emptying into the river was extended.

8. No location in town that seems to be particularly unhealthy.

9. Reports are made to the town council of nuisances dangerous to the public health.

I have no knowledge that any serious disease of domestic animals has largely prevailed during the year.

KENT COUNTY.

1. WARWICK.

2. Health Officer, Albert G. Sprague, M. D.

3. The following diseases had large prevalence in town during 1890:

Influenza epidemic, whole town, legion of cases, no deaths, January; measles epidemic, whole town, large number of cases, no deaths, summer; tonsillitis, whole town, large number of cases, no deaths, December.

4. Isolation was not maintained or attempted.

6. Some inspections of premises were made, where sickness prevailed as to the sanitary condition, no evident cause found.

7. Sanitary inspections were made during 1890. By order of town council, and through complaints of adjoining owners.

8. No particularly unhealthy location.

9. Reports are made to the town council of all nuisances dangerous to the public health, not on buildings unsafe for occupants in case of fire.

10. No disease of domestic animals largely prevailed during the year.

1. WEST GREENWICH.

2. Health Officer, has none.

3. No epidemics or large prevalence of contagious or infectious diseases in town during 1890.

7. No sanitary inspections made during 1890 by order of the town council.

Do not know of any location in town that seems to be particularly unhealthy.
The town council removes nuisances dangerous to the public health, when known.

NEWPORT COUNTY.

1. JAMESTOWN.

2. Health Officer, Abbott Chandler.

3. There were no epidemics, or any large prevalence of any contagious or infectious diseases in this town during 1890.

6. No inspection of premises was made, where sickness prevailed as to the sanitary condition of the premises.

7. No sanitary inspections during 1890 by order of the town council or from my own option.

8. No locality particularly unhealthy to any considerable number of persons.

9. Reports are made to the town council of nuisances dangerous to the public health, when known.

1. MIDDLETOWN.

2. Health Officer, John Peckham.

3. There was no large prevalence of contagious or infectious diseases in town during 1890.

Diphtheria, in the westerly part of the town, just on the line of Newport. Swill has been spread upon the land for many years in the past near both the houses when the sickness occurred; 5 cases; no deaths; first case May 14th, June 9th and 26th.

4. No isolation maintained; as soon as the case was reported notice was posted. Those not sick were not as careful as they should be.

6. No inspection of premises made, where sickness prevailed.

Some think the cause of Diphtheria in the cases mentioned to have been from the garbage spread upon the land in years past.

7. Complaint was made in one case of a privy, I did not think it dangerous, the complainant would not take any trouble to prove that it injured his well, so no action was taken.

8. No place known to be particularly unhealthy to any considerable number of persons.

9. I report to the town council nuisances dangerous to the public health, when known, had no occasion to do so in 1890.

No serious disease of domestic animals has largely prevailed during the year.

1. NEWPORT CITY.

2. Health Officers, Executive of the Board of Health, P. S. Kaull.

3. See Report appended.

4. Isolation was maintained and disinfection by fumigation and otherwise was resorted to.
5. The number isolated was the same as reported.
6. Inspections in large number and of various premises and conditions were made.

NEWPORT BOARD OF HEALTH.

The following is the annual report of the board of health presented to the City Council:—

To the Honorable City Council of the City of Newport:—

GENTLEMEN:—The board of health herewith respectfully presents for your consideration its sixth annual report. The members constituting the board of health for the year 1890 were:—Dr. Henry E. Turner, Dr. C. F. Barker, Dr. Francis H. Rankin, Mr. James B. Cottrell and Colonel John Hare Powel. The board organized in January and elected Dr. Barker president and Dr. Rankin secretary, and voted that on the first and third Thursdays of each month should be held regular meetings. Mr. P. S. Kaull was appointed executive officer, and has ably and efficiently fulfilled his duties.

Population of the City.

It may not be out of place to consider briefly the last official census returns of the population of Newport, since upon the enumeration of the population is based the per centage of much that is important in the health records. We possess accurate returns of the number of deaths, and should have a correct census return of the population in order to obtain the true death-rate. The following statistical figures seem to justify the statement that the population of our city as given by the census report of 1890 (about 20,000) is incorrect, and that the approximately correct population is at least 22,000.

In 1885 the state census gave the city 19,566 population. If we take these figures as a basis of estimate, and add the average increase of population per five years since 1860, which we find is 13 per cent., the correct figures of 1890 should be 22,109. Again, it is but just to feel that the population has at least increased by the excess of births over deaths during the past five years; this we find to be 1,625, which if added to the returns of 1885 will give a population of 21,625. This does not include the new families that have moved into the city. From another class of figures we ascertain that in 1885 there were 3,038 occupied dwellings in the city and that the average of 6.4 persons occupied each dwelling; also that the average increase of dwellings for five years during the previous ten years has been 367. By applying these figures to 1890 we should have 3,388 occupied dwellings and a population of 21,911.

From whatever the source we approach estimated population we can see an increase over that of the United States census for 1890, and that our population should be about 22,000. In our estimate of death-rate, however, we reluctantly accept the official figures, although in doing so we place our city lower than she deserves in the list of returns, graded by the death-rate.

Health of the City.

The official health statistics for the year 1890 do not present as favorable a record for general healthfulness of the city as compared with the previous four or five years. This has undoubtedly been due in a great measure to the influence of that mysterious disease, La Grippe, which lowered the vitality of a large number, and thereby both rendered them more liable to contract other forms of disease and also rendered them less able to recover when taken ill.

During the year 342 deaths, exclusive of still-birth, took place within the city limits, an increase of 23 over the returns of last year. Based upon the official United States census returns of 20,000 inhabitants, this number of deaths would give our city a death-rate of 17.1 per 1,000 of the population, or based upon a population of 22,000, which we consider a nearer approach to accuracy, the death-rate would be 15.5 per 1,000. A death-rate of 17.1 per 1,000 is equivalent to one death in every fifty-eight of the population. The number of deaths reported from zymotic diseases was 70; from constitution diseases, 62; from local diseases, 146; from developmental diseases, 51; and from violence or accident, 13. Of the deaths by violence one was caused by a burn; two by the inhaling of illuminating gas; one, homicide; one, by fall, and eight, by drowning; of the latter, one was drowned at the general beach, two at Bateman's beach and five in the harbor.

The mortality among children under five years of age was 91, an equivalent to a death-rate of 26.1 per cent. of the total mortality. This is slightly in excess of the record of last year, which gave 24.1 per cent. of deaths among children. Among the aged, seventy decedents, or 20.5 per cent. of the mortality, were over seventy years of age. The number of still-births was 25, a smaller number than had been reported for several years. Newport was the nativity of 165 decedents; 76 were born in other sections of the United States, and 101 were of foreign birth. The average age of the decedents was 40 years, 2 months and 9 days.

Consumption.

Under the classification of consumption are included all cases dying from tubercular disease of the lungs and throat. This disease has of late commanded the serious attention of physicians and sanitarians, who, in the light of modern research have acquired a more complete knowledge of the disease, and the methods by which it is propagated. It is now almost universally admitted by those who have given the subject a study that consumption or tuberculosis should be classed as a preventable disease, and that by sanitary measures and hygienic observance much may be done to check its spread. Eventually, it seems to me tuberculosis will be included in the nomenclature of diseases under the classification zymotic, or diseases of a germ origin, and, moreover, that the methods of its propagation will more seriously command the attention of boards of health, since it is now definitely shown that it either is contracted from some individual having the disease, or is introduced into the system in food, in the meat or milk from tubercular cattle. In many cities the boards of health are clad with authority, and have experts for the examination of meat and milk offered for sale. Through this agency a large quantity of diseased meat and unwholesome milk is destroyed, and thereby many cases of disease warded off. Tubercular cases contracted from food are doubtless few in number compared with those contracted from individuals. It is

the accepted opinion of those who have thoroughly investigated the disease that it is produced by a germ or micro-organism introduced into the system; and that certain people are more receptive to the germs, for the reason that their tissues are of such a nature that the germs easily find lodgment. The disease itself is not transmitted from parent to child, but the condition of the system making one liable to accept the germs is transmittible; in this respect only is the disease hereditary. In other words, if these receptive people could live in a pure atmosphere, in an air free from tubercular germs, and partake only of food also free from tubercular germs, they never would contract tuberculosis.

The disease is conveyed from individuals almost entirely by the sputa or expectoration. This material contains tubercular germs in greatest abundance, and when ejected from the body into any receptacle as a handkerchief or cloth, or on the floor or street, or in fact anywhere, and permitted to dry, the germs are taken up and wafted about by the air current. Therefore great care should be taken to destroy this sputa. If by chance this material should be voided upon handkerchiefs, they should not be thrown in with the general wash, but each day washed and boiled or soaked in some disinfecting fluid. Ordinary washing does not destroy the germs. The handkerchief must be boiled or disinfected in order to destroy the germs and be rendered free from infection. If cloths are used as receptacles for the sputa, they should be destroyed daily by burning. Sputa cups should also be daily thoroughly cleansed and scalded. The market is now provided with a sputa cup, made of paper, which can be destroyed by fire. This is the most sanitary cup and safest means yet introduced for collecting the sputa of consumptives or the sputa of contagious throat disease. As long as the sputa is kept moist, the germs cannot become a source of danger, but when dried, the germs are liberated to be wafted about with harmful results. The breath of a tubercular patient is perfectly free from germs, and there is no danger in breathing the same air provided the sputa is carefully destroyed. Consumption patients should be urged never to spit upon the floors, especially in cars, churches and public buildings. Fortunately, the mass of the people, from their condition of general good health, are enabled to resist the reception of these tubercular microbes, but when a depression of the vital forces occurs, and with those of a susceptible nature, the germs more readily find lodgment. Whenever tubercular patients are housed, unless care is observed to destroy and disinfect the sputa, the dust swept from the floors or brushed from the furniture will be found to contain the germs.

Climatic influence is an important factor in favoring the propagation of consumption, but the germ or seed must be sown before the disease can arise.

The depressing influence of La Grippe during the past year was the immediate cause of the increase in our death-rate from consumption over the general average of the past ten years, since a number of cases of hasty consumption were directly due to this epidemic disease. During the year 1890 forty deaths were reported from the disease, or about one-eighth of the total number of deaths, a death-rate of 2 per 1,000 inhabitants.

Statistical reports from cities throughout our country show that a greater number of deaths occur from consumption than from all forms of contagious disease (including typhoid fever) combined—a startling fact when we consider that the disease is contracted by the air we breathe and the food we eat. It seems emi-

nently proper that the board of health, as well as physicians in general, should draw the attention of the community to the danger arising from the expectorations of consumptive patients, and therefore no apology is offered for so much of my report being devoted to this subject.

Zymotic Diseases.

An increase of twenty-four deaths over the number in 1889 has taken place in diseases of zymotic or germ origin. During the year 1890 there were seventy deaths from diseases under this classification, an equivalent to 20.7 per cent. of the total mortality, or a death-rate of 3.5 per 1,000 of the population. The following are the most prominent causes of death under this class:—

Diarrhœal Diseases—Seventeen cases of cholera infantum were reported, two of which occurred in July, eleven in August and four in September. This is not an excessive number of cases when compared with the report of former years. Fifteen deaths were reported from dysentery during the year, an increase of eight over the previous year. No deaths were reported from cholera morbus.

Typhoid Fever—But two deaths from this disease were reported during the year. Seven cases were known to exist in the city; of these, four were imported into the city, that is, the patients came to the city ill with the disease. Three cases only had their origin within the city limits.

Scarlet Fever and Measles—Two cases of scarlet fever and two of measles were reported. No death occurred from either disease.

Diphtheria—Forty-one cases of this disease were reported, with thirteen deaths therefrom; an increase of twenty-five in the number of cases and four in the number of deaths over the previous year. Considerable attention has been centered upon this disease during the past twelve months, on account of the unusually contagious character which it manifested. A large number of the cases had their origin strictly from contagion, not from the condition of their habitations. Strenuous efforts have been made to check the contagion in each case. The house has in every instance been posted with the notice of diphtheria, and fumigation with sulphur and with other disinfectants ordered before the notice was removed from the house.

The board of health has seriously considered the advisability of recommending the reporting by physicians of other forms of throat disease, aside from croup and diphtheria, and also of recommending that children living where these diseases occurred should be forbidden to attend school. The necessity for this arises from the fact that many cases, thought to be tonsillitis or ulcerated sore throat, are in many instances diphtheria, since in tracing the history of some of the cases it has been found that true diphtheria has been contracted (in some instances proving fatal) from cases supposed to be ill with other forms of throat disease. Of the forty-one cases reported, twenty-two were located within the section bounded by Gibbs street, Malbone avenue, Broadway and Farewell street, a section not as perfectly supplied with sewers as other sections of the city.

An arrangement has been made with the trustees of the Newport Hospital whereby, at an expense of fourteen dollars a week, all cases of a contagious character sent by the board of health may be cared for in the emergency ward, an

isolated building on the hospital grounds. This has proved a great boon to the board, which has heretofore labored under trying, inadequate and expensive conditions in the care of these cases. It will also prove a great blessing to the poor and suffering, many of whose lives will be saved by the unsurpassed care given in this house of mercy. The thanks of the board of health are tendered the hospital trustees for their offer to care for these cases.

An additional safeguard against contamination from contagious cases has been established by the enactment of the ordinances, suggested by the board of health, forbidding the removal of the remains of anyone dying of a contagious disease, in any vehicle excepting in a public hearse, and also forbidding anyone excepting a licensed undertaker taking charge of funerals or burial of the dead. This ordinance became a necessity, inasmuch as in several instances early in the year the remains of children dying from diphtheria had been carried to the cemetery in public hacks.

Infectious Cases Reported in 1890.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Scarlet Fever,													
Cases.....											2		2
Deaths.....													
Diphtheria,													
Cases.....		1	3	2	3	6	6	3	2	8	2	5	41
Deaths.....			2	2		3	1		1	4			13
Typhoid Fever,													
Cases.....							1	2			1	1	7
Deaths.....									1	1			2
Measles,													
Cases.....				1	2								2
Deaths.....													

Influenza or La Grippe—The widespread epidemic of this disease, which extended over the greater part of Europe and the United States, did not omit Newport in its visitation. The first case appeared in the city towards the latter part of December, 1889, and continued with severity during the months of January and February, 1890. We have no means of ascertaining the number of inhabitants afflicted with the epidemic, but it is safe to say that from thirty to forty per cent. came under its influence. The immediate mortality was not great, for among the thousands ill with the disease nine deaths only during January and February were attributed to it. The sequelæ of the disease were numerous and varied, but its chief effect was shown upon the nerve centers. A lowered state of vitality, characterized by great physical and mental weakness, has been the result in a large percentage of cases. This lowered vitality has lessened the resistance to other forms of disease, especially those of the pulmonary organs, and has doubtless been indirectly the cause of an increased death-rate in many sections of the country. Adults were chiefly affected by the influenza, few cases occurring

among children under five years of age. The history of this remarkable epidemic has been so extensively written upon that it is unnecessary to comment further upon it in my report, since its character and sequelæ in the various cities have been so identical. From a review of the reports and from a personal study of the disease, it seems to me that it is of a purely contagious character, and communicated, as are all diseases of this class, by human intercourse. The conditions of the atmosphere entered as a factor to favor or modify the severity and form of the epidemic. The rapid spread of the disease is not inconsistent with the view of contagion; it only bespeaks a rapidly developing form of micro-organism. The origin of the disease is still a mooted question. It is claimed, however, that its birthplace is in Russia, since its particular micro-organism is found in the alluvial soil of certain sections of that country.

Births.

The following table exhibits the number of births in the city during the past five years, and gives a comparison between births and deaths:—

YEAR.	No. Births.	No. Deaths.	Excess of Births over Deaths.	Births per 1,000 Inhabitants.	Deaths per 1,000 Inhabitants.	Excess of Birth Rate.
1886.....	600	309	291	30.00	15.45	14.55
1887.....	632	301	331	31.06	15.75	16.55
1888.....	99	315	384	28.85	15.75	13.10
1889.....	714	319	395	35.70	15.95	19.75
1890.....	666	342	324	33.03	17.01	16.20

From the above table we find that during the past five years 3,211 births have taken place, and that there were 1,625 more births than deaths; also that the average birth-rate during this period has been 31.8 per 1,000 inhabitants; the average death-rate, 15.86 per 1,000; and the average excess of birth-rate over death-rate, 16 per 1,000. This average excess of birth-rate over death-rate is largely in excess of that of the whole state.

Water Supply.

In our last report a description was given of the extensive filter plant recently constructed by the Water Works Company. Since then, the filter plant has been housed-in, so that the filtration need not be interrupted by freezing during the winter months. A large and powerful pump is being added to provide for all possible demands upon the water supply. In the process of filtration already described, the addition of alum to the water before it enters the filter is an all-important factor in rendering the water free from the organic matter held in solu-

tion. It is to be regretted that the water company have not of late made this addition. The water has merely been allowed to filter through the sand bed of the filter, and thereby removing only the material in suspension. This of course renders the water measurably purer, but the addition of alum becomes a necessity in order to remove the full amount of organic matter. Many have erroneously fancied that the addition of alum to the water rendered it unwholesome. The alum added is only a fraction of a grain to the gallon, becomes completely entrapped in the coagulum it forms with the organic matter, and is retained in the sand of the filter; so that the water passing through is perfectly free from any trace of the alum. The board of health recommends that in the future the water company use the alum in the filtering process.

During the year 387,955,406 gallons of water were supplied to the city, equivalent to about 1,000,000 gallons per day throughout the year. From the number of houses supplied with water it is approximately estimated that about 15,000 of the population utilize the city water.

Garbage and Night Soil.

Much has been accomplished during the year in reaching a conclusion as to the best methods for the disposal of garbage and night-soil. The question has been carefully considered by the joint committee from your honorable body and from the board of health and the unanimous opinion has been reached that by cremation only can the garbage of the city be disposed of without detriment to the health and interests of the city. This joint committee, after a careful study and personal inspection of various crematories that are in active operation throughout the country, feel justified in recommending one that they are convinced is capable of destroying the city offal without giving offense, and at a reasonable cost. Before another year passes it is to be hoped that garbage cremation will be fully accomplished. The disposal of night-soil is also a question of the highest importance. The present method of removal and deposit of this material is a constant menace to the health of the community. We have the assurance, however, that this question will also be settled in a manner satisfactory to the board of health.

The board of health desires to express its great pleasure at the attitude your honorable body has taken in bringing these vexed sanitary problems to a successful solution, and also to express a full appreciation of the courtesy shown in listening to its suggestions.

YEAR.	1886.	1887.	1888.	1889.	1890.
Estimated Population.....	20,000	20,000	20,000	20,000	20,000
Annual death-rate per 1,000 inhabitants.....	15.01	15.05	15.75	15.95	17.01
Deaths from zymotic disease.....	51	62	68	46	70
Per cent. of deaths from zymotic disease per 1,000 inhabitants.....	2.55	3.01	3.04	2.03	3.05
Deaths from violence.....	10	21	7	10	13
Number of still-births.....	32	30	29	30	25
Deaths of children under 1 year.....	51	70	59	48	57
Deaths of children under 5 years.....	77	108	99	77	91
Per cent. of deaths under 5 years to total mortality.....	24.08	35.88	31.04	24.01	26.06
Deaths over 70 years.....	66	55	61	83	70
Total number of deaths from diarrhoeal disease.....	13	37	31	32	40
Croup.....	8	2	8	1	2
Cholera Infantum.....	10	26	19	15	17
Dysentery.....	1	1	2	7	15
Diphtheria.....	18	3	9	9	13
Measles.....	0	10	0	0	0
Scarlet fever.....	2	4	4	1	0
Typhoid fever.....	9	4	7	7	2
Cancer.....	7	6	6	8	12
Diseases of nervous system and brain.....	42	35	48	43	32
Phthisis.....	43	31	25	36	41
Per cent. of deaths from phthisis per 1,000 inhabitants.....	2.15	1.55	1.25	1.08	2.05
Bright's disease.....	10	9	14	12	11
Bronchitis.....	8	13	14	16	13
Heart disease.....	20	20	32	31	21
Pneumonia.....	22	21	16	20	17
Whooping cough.....	0	3	2	0	6

The mortuary tables for 1890 herewith appended exhibit the number of deaths, and the causes; also the sex, color, social condition, nativity and age of decedents and the number of deaths in each ward. I also append a comparative state of mortuary statistics of the past five years.

Respectfully submitted,

FRANCIS H. RANKIN, M. D.,
Secretary of Board of Health.

1. PORTSMOUTH.
2. No health officer aside from town council.
3. No epidemics, or any large prevalence of contagious or infectious diseases in this town during 1890.

7. No sanitary inspections during 1890 by order of the town council.

No location in town that seems to be particularly unhealthy to any considerable number of persons.

Nuisances dangerous to the public health, are reported.

1. TIVERTON.
2. Health Officers, Town Council, Report by J. T. Cook.
3. We know not how many have been sick. The death returns will show

how many have died of each disease. Cases of typhoid fever in North part and cases of whooping cough in South part of town.

4. No isolation maintained that we know of.
6. No inspection of premises made, where sickness prevailed, as to sanitary condition of the premises.
7. No sanitary inspections during 1890 by order of the town council.
8. No location particularly unhealthy to any considerable number of persons.
9. No reports to town council of nuisances dangerous to the public health.
10. No serious disease of domestic animals has prevailed.

PROVIDENCE COUNTY.

1. BURRILLVILLE.

2. Health Officer, Herbert F. Mowry.

3. There has been a considerably large prevalence of contagious or infectious diseases in town during 1890.

Typhoid and Scarlet Fevers; Oakland and Mapleville; say 12 cases Typhoid and 4 of Scarlet Fever; 5 died; July and August mostly.

4. Isolation maintained only to the extent of preventing outside parties from entering houses where sick persons were.

6. I inspected the villages of Oakland and Mapleville and found in four cases that sink drains were flowing into cellars and a number of other drains, cess-pools, etc., in bad sanitary condition. All these cases I attended to and had properly fixed.

7. Sanitary inspections were made during 1889 by order of the town council and also from my own option, as above at Oakland and Mapleville, and throughout the town generally, wherever I found offensive or unhealthy sanitary conditions prevailing.

8. Since the above two villages were overhauled I don't know of any particularly unhealthy locality.

9. Nuisances dangerous to the public health are reported to the town council.

10. No serious disease of domestic animals.

1. GLOCESTER.

2. Health Officer, Job Owen.

3. There have been no epidemics or contagious diseases to my knowledge.

4. No isolation maintained or attempted.

6. No inspection of premises made where sickness prevailed as to the sanitary condition of the premises.

7. No sanitary inspections during 1890 by order of the town council or from my own option, except I was called upon twice, once to examine cess-pools and privy vault. I called upon the owners of the property, and they were cleaned and kept so. Had no further complaint.

8. No location in town that seems to be particularly unhealthy to any considerable number of persons.

9. I should report to the town council nuisances dangerous to the public health if I knew of any.

10. No serious disease of animals known.

1. LINCOLN.

2. Health Officer, Wm. H. Quigley.

3. Quite large prevalence of some contagious or infectious diseases in town during 1890.

La Grippe; all over the town; epidemic; number of deaths not known; January and February. Diphtheria; Albion and Manville; epidemic; number of deaths not known; January, February and November. Diarrhœa and Dysentery; all about; average; number of deaths not known; warm months. Whooping Cough; Central Falls and Lonsdale; large number; number of deaths not known. Measles; Manville; number of deaths not known; June.

4. No isolation maintained or called for.

6. No inspection of premises made where sickness prevailed.

7. No sanitary inspection during 1890 by order of the town council or from my own option.

8. No particularly unhealthy locality known.

9. I should report to the town council nuisances dangerous to the public health, if known.

10. No serious disease of domestic animals.

1. NORTH PROVIDENCE.

2. Health Officer, Sanford E. Kinnecom.

9. I report to town council nuisances dangerous to the public health.

1. NORTH SMITHFIELD.

2. Health Officer, John B. Green.

3. Do not know of any large prevalence of contagious or infectious diseases in town during 1890, except Scarlet Fever; Waterford; 2 cases; month of July.

4. Isolation was maintained partially by placing cards.

6. No inspection of premises made where sickness prevailed as to the sanitary condition.

7. Did not make any sanitary inspection during 1890 by order of the town council or from my own option.

8. No location particularly unhealthy to any considerable number of persons.

9. Reports are made to the town council of nuisances dangerous to the public health.

10. No disease of domestic animals has largely prevailed.

1. PROVIDENCE CITY.

2. Superintendent of Health, Charles V. Chapin, M. D. Medical Inspector, Gardner T. Swarts, M. D. Superintendent of Vaccination, Charles H. Leonard, M. D. Sanitary Inspector, John S. Rogers.

3. In full supplement of the statements made on previous pages in relation to sanitary movements and the prevalence of disease in the city, the following extract from the report of the Superintendent of Health is presented :

“The number of deaths reported during the year was 2,877, which was 367 more deaths than in the preceding year. The estimated population in 1889 was 127,000, giving a death-rate of 19.76. The population July 1, 1890, according to the eleventh United States census, was 132,043, and the death-rate based upon this was 21.78. This was 202 more than in the preceding year, and 2.09 more than the average for thirty-five years. This is the highest death-rate since 1873. The two most prominent causes of this increase were epidemic influenza and diarrhoeal diseases; 64 deaths were attributed to the former alone, and, as will be shown in another place, a still larger number were doubtless due to its direct influence. It is probable that not far from 150 deaths were caused in Providence by this disease.

There were 312 deaths from diarrhoeal diseases in 1890. These include diarrhoea, dysentery, cholera morbus, cholera infantum and enteritis. There were 80 deaths more from these diseases in 1890 than in 1889. The 312 deaths were 10.87 per cent. of all deaths, almost exactly the average for thirty-six years, but it is 1.60 more than in 1889 and more than in any year since 1884. This great increase over the preceding year was confined almost exclusively to August, there being 54 more deaths from these diseases in this month in 1890 than in 1889. Of cholera infantum, which is the most important of the diarrhoeal diseases, there were only 25 deaths in August, 1889, while there were 75 in 1890. In July the increase was only from 56 to 62. This is probably to be attributed to meteorological conditions. A high temperature is always conducive to diarrhoeal diseases, as is shown by innumerable statistics. While the mean temperature of August, 1890, was only 1.7° higher than in 1889, the maximum was 90° as against 88.5° in the former year, and there were, in 1890, 14 days in which the temperature was 80° or over, and only 8 such days in 1889.

There were, in 1890, 23 deaths from malarial diseases, or 1 less than in the preceding year. Malaria, doubtless, still lingers in certain parts of the city, but I believe it is diminishing slowly, and I have reason to think that deaths due to other causes are not infrequently attributed to it.

There were 385 deaths from consumption in 1890, or 76 more than in the preceding year. The number of deaths from this cause was certainly increased some by the influence of influenza, but even with this addition the number is less than the average, being 13.38 per cent. of all deaths, while the average for 35 years is 16.05.

INFLUENZA.

Epidemic influenza has appeared at varying intervals in Europe for 500 years, and in this country several times since its settlement. Previous to this last epidemic it has visited us only once during the century and that was in 1842.

The last epidemic appeared first in Russia during the latter part of October, 1889. It thence spread rapidly through Europe, appearing in Berlin, Vienna and Paris in November, and in London in December. Its advent in the United States was only slightly later than in London, for it was noticed in most of our large cities nearly simultaneously soon after the middle of this month. Cases probably occurred in Providence as early as December 17th, which was also the date of its first appearance in New York, but it was a week or ten days before it prevailed at all extensively. As reports of this disease were not required of practicing physicians and were not made by them to me, I had no way of determining its prevalence in any accurate manner without making special and laborious investigations, and these were not undertaken. The chief characteristics of the disease were described by Dr. G. L. Collins, in an account of 64 cases observed by him, as follows:

"Temperature ranged from 99° to 105 4°, between 101° and 102° in a majority of the cases; pulse from 88 to 148; distinct history of a chill in 4; coryza in all; headache in 51, large proportion had frontal headache, though some complained of pain at back and base of head; muscular pains in 61; intense back ache in 2; nausea or vomiting or both in 21; diarrhoea in 2; cough in almost all cases severe, especially after several days; sore throat in 3; swollen glands of neck in 2; prostration, obstinate and continued in 4; herpes of lips in 2; relapse after being out and renewal of initial symptoms with fever in 5 cases; complications, acute bronchitis, 2; mental depression, 3; tonsillitis, 1; confined to house, 51; confined to bed, 45. Among those confined to the house, and now practically recovered, the average duration of symptoms sufficient to restrain them from daily avocations, was 3 31 days "

Other symptoms were sometimes observed, but from conversation with many physicians, I should say that the above presents a fair picture of the epidemic influenza as it appeared in this city.

As to its prevalence, inquiry of physicians elicited estimates that from 25 to 60 per cent. of the entire population were affected. There is not much doubt that it was between 30 and 40 per cent. In the height of the epidemic all forms of business were seriously interfered with. The disease continued for from six to eight weeks, and died out rather more slowly than it appeared. The prostration which followed in many individual instances continued for many weeks, and months even. This debilitating effect of the disease which was so characteristic of it, was the direct cause of death in many concurrent diseases and also prepared the system for the advent of other affections, especially those of the respiratory system, as bronchitis and pneumonia. The latter particularly was observed to follow influenza.

The epidemic reached its climax between the 6th and 10th of January, but the greatest number of deaths were reported for the week ending January 17th, namely, 109.

CONTAGIOUS DISEASES.

The diseases referred to in this connection are measles, whooping cough, scarlet fever, typhoid fever and diphtheria.

The number of deaths from measles was 31. The deaths in previous years since 1856 are shown in the following table :

1856	1	1866	9	1876	0	1886	7
1857	2	1867	0	1877	2	1887	90
1858	40	1868	4	1878	50	1888	2
1859	0	1869	6	1879	0	1889	14
1860	0	1870	16	1880	3	1890	31
1861	6	1871	1	1881	25		—
1862	1	1872	7	1882	4	35 years	401
1863	16	1873	28	1883	8		
1864	7	1874	4	1884	7		
1865	7	1875	0	1885	8		

Whooping cough caused 30 deaths in 1890. The deaths in previous years since 1856 are shown in the following table :

1856	10	1866	8	1876	35	1886	23
1857	2	1867	2	1877	16	1887	12
1858	7	1868	13	1878	43	1888	28
1859	22	1869	16	1879	15	1889	44
1860	19	1870	24	1880	11	1890	30
1861	25	1871	10	1881	40		—
1862	3	1872	10	1882	40	35 years	670
1863	6	1873	18	1883	4		
1864	10	1874	33	1884	28		
1865	31	1875	8	1885	24		

Both of these are serious diseases, so serious that I am considering the advisability of taking some official action to prevent their extension. I have hitherto felt that judging from the difficulty experienced in inducing the public to take proper precautions in scarlet fever and diphtheria, diseases the contagious and dangerous nature of which are much more fully appreciated, it would be futile to require by law the reporting of measles and whooping cough and the observance of isolation and disinfection in their management. But the success in this direction obtained in other cities inclines me to think that it would be advisable to make the attempt. At present neither of these diseases are reported by the attending physicians, so that it is impossible to judge of their prevalence except approximately from the number of deaths.

The number of deaths from scarlet fever in 1890 was 8 or 0.27 per cent. of deaths from all causes. This is less than in any previous year.

There were 39 deaths from typhoid fever, or 1.35 per cent. from all causes. This is also less than in any previous year, the average for 36 years being 2.28.

Diphtheria caused 94 deaths, which is slightly less than in the preceding four years, and is also slightly less than the average since 1858, when diphtheria first appeared.

The three diseases last mentioned are the ones to which particular attention has been given by this department during the last six or seven years, and, as will be seen by the chart, their decrease during this period has been considerable. The time is, however, too short for the figures to be of much value as an indication of the effectiveness of the measures taken. It may also be noticed that there is far from being a corresponding decrease in measles and whooping cough, in which diseases precautionary measures have not been so persistently urged. The death-rate from these last named diseases has not changed very much during the whole period covered by our vital statistics.

Cases of the contagious diseases specified by the board of aldermen, namely scarlet fever, typhoid fever and diphtheria, are required to be reported to this office by the attending physician. By state law the head of the household is also made responsible for the notification of these diseases.

As checks upon these reports, I have the reports from the public school teachers and the personal investigations of the inspector. The following list shows the number of contagious diseases during the last five years that the attending physician failed to report and which were discovered in other ways :

YEAR.	Scarlet Fever.	Typhoid Fever.	Diphtheria.
1886.....	14	11	21
1887.....	125	18	62
1888.....	29	4	50
1889.....	4	6	15
1890.....	2	4	7

There has certainly been a very great improvement in this matter, and the reports during the last two years leave little to be desired. I believe that there are only two or three physicians in the city who do not intend to report every case, and even these are induced by public opinion to report most of their cases. Of course error in diagnosis sometimes results in failure to report until the nature of the disease is made certain, perhaps by the death of the patient. The readiness on the part of the majority of the practicing physicians to comply with the law is a most gratifying evidence of their regard for the public welfare and their interest in the scientific investigation of disease. It is entirely wrong to require these reports without compensation, and the physician should receive a small fee for each return made by him.

When cases of contagious disease are visited by the medical inspector the premises are usually examined by him with reference to unsanitary conditions. In the finer residences, however, particularly when the owner of the house is its occupant, the inspection is omitted unless requested.

The following tables show the results of these inspections for the last six years:

RESULTS OF THE EXAMINATION OF PREMISES IN CASES OF CONTAGIOUS DISEASES.

Scarlatina.

YEAR.	Vaults Full.	Cesspools Full.	Yards Filthy.	Untrapped Sinks.	Defective waste pipes and drains.	Filthy Cellars.	No Nuisance.	Total.
1885	23	11	14	113	56	20	32	269
1886	16	4	4	101	61	4	45	235
1887	70	9	14	232	88	5	247	665
1888	14	3	9	42	34	3	128	233
1889	4	4	.....	42	9	.....	51	110
1890	4	2	.....	19	4	.....	56	85
Total	131	33	41	549	252	32	559	1,597

Diphtheria.

YEAR.	Vaults Full.	Cesspools Full.	Yards Filthy.	Untrapped Sinks.	Defective waste pipes and drains.	Filthy Cellars.	No Nuisance.	Total.
1885	8	3	4	33	20	4	28	100
1886	24	4	3	97	55	2	86	271
1887	25	5	2	112	49	4	87	284
1888	20	2	7	80	32	4	92	237
1889	16	7	4	68	27	6	89	217
1890	17	1	3	52	28	.....	102	203
Total	110	22	23	442	211	20	484	1,312

Typhoid Fever.

YEAR.	Vaults Full.	Cesspools Full.	Yards Filthy.	Untrapped Sinks.	Defective waste pipes and drains.	Filthy Cellars.	No Nuisance.	Total.
1885	10	3	5	39	28	3	12	100
1886	25	3	6	57	32	4	26	153
1887	10	1	2	27	9	1	21	71
1888	29	9	11	163	51	13	154	430
1889	9	3	1	61	21	3	96	194
1890	13	5	.....	27	11	.....	46	102
Total	96	24	25	374	152	24	355	1,050

There has been a very great improvement in the sanitary condition of the houses in this city and their surroundings during the last few years. This has been frequently remarked by the medical inspector, and this tabulation demonstrates it very plainly. I feel that this improvement is due almost entirely to the efforts made by this department in systematic inspections and in the diffusion of information in regard to plumbing, drainage and similar subjects. It has long been held by many, and believed by some at the present day, that diphtheria and typhoid fever are in the majority of instances dependent upon "unsanitary conditions," such as filthy vaults, yards, and particularly defects in the interior drainage, such as untrapped sinks and leaky waste-pipes and drains. Scarlet fever on the other hand is not supposed to be caused in any such way, but to be spread entirely by contagion. If this is true, we ought to find some difference in the proportion of these "unsanitary conditions" in the above tables. As a matter of fact, we find that there is practically no difference. Thus, as regards untrapped sinks and defective waste-pipes and drains, they were found in 50 per cent. of the houses examined in scarlet fever; in 49 per cent. in diphtheria, and in 51 per cent. in typhoid fever. As regards vaults, cesspools and yards, nuisances were found in 12 per cent. of the houses with scarlet fever, 11 per cent. of diphtheria, and 14 per cent. of typhoid fever. These facts are thus opposed to views of the causation of these diseases which are universally held by the public and very generally by physicians, even those who make a specialty of hygienic studies. Of course the facts here presented are few in number and only from a single city, and are not to be considered as in any way conclusive in such an intricate subject as the causation of the infectious diseases. But they are entirely confirmatory of the views that have lately been given credence in regard to their etiology. Scarlet fever has never been considered to be otherwise caused than by the mediate or immediate passage of the poison from one person to another. It

is, then, a contagious disease in the strictest sense of the word. There is no evidence whatever that the poison can grow in any way outside of the body.

Diphtheria on the other hand has long been believed to be much more often contagious in an indirect than a direct manner. It has been assumed on what seems to me insufficient evidence that the poison develops readily outside of the body, and finding its way into drains, cess-pools and privy-vaults and other places where filthy matter accumulates, there rapidly grows and thoroughly infects the surrounding atmosphere. If this is true, that diphtheria is usually spread in this way, we ought to find unsanitary conditions more often in houses where there is diphtheria than we do in the average house, or in houses where there are other diseases not spread in this way. But we do not find this to be true in Providence. This is in accord with recent bacteriological investigations which tend to show that the poison of diphtheria grows only with great difficulty and in rare instances outside of the living body. Additional points in regard to these diseases will be referred to under special headings.

SCARLET FEVER.

The following table shows the cases and deaths from scarlet fever for each month during the last six years, and the number and ratio of deaths to cases for each year during the last seven years :

SCARLET FEVER.		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total of Cases.	Total of Deaths.	Ratio of Deaths to Cases.
1884.	Cases													593	57	10.59
	Deaths															
1885.	Cases	69	43	42	23	24	19	10	13	30	45	35	40	383		
	Deaths	5	8	8	4	..	1	2	1	2	3	1	3		38	9.92
1886.	Cases	56	39	16	19	15	4	14	12	11	15	16	20	237		
	Deaths	4	3	..	1	1	2	2	4	1	3	4	5		30	12.65
1887.	Cases	54	38	39	48	22	21	26	42	55	256	122	105	848		
	Deaths	8	3	4	1	2	5	8	10	17	47	22	26		153	18.04
1888.	Cases	91	49	44	45	31	18	15	9	13	12	21	13	361		
	Deaths	18	19	9	13	8	4	1	1	1	2	3	1		80	22.16
1889.	Cases	16	13	34	19	11	14	3	6	13	9	14	10	162		
	Deaths	4	..	3	8	3	2	4	..	..	1	..	..		25	15.43
1890.	Cases	1	6	20	16	13	9	3	1	5	4	24	34	136		
	Deaths .....	..	1	1	1	2	..	..	..	..	..	2	1		8	5.88
Total.	Cases	287	188	195	170	116	85	71	88	147	341	222	222	2,665	391	14.07
	Deaths	39	34	25	28	16	14	17	16	21	56	32	36			

As is well known scarlet fever tends to recur at regular intervals. The last epidemic was in 1887-8; the one before that was an exceedingly mild one in 1885, and the one before that, a very severe one, in 1879-1880. During the first ten months of 1890 there were very few cases of scarlet fever, and, in fact, for the whole year the number of cases was less than it has been in any year since reports have been required. Nevertheless as three years have elapsed since the last epidemic, and as neither that or the preceding were very extensive, it seemed quite probable that there might be a recurrence of the disease in the fall of this year. Therefore the increase which was noted in the latter part of November and December was not unexpected. The disease, however, was exceedingly mild, and was in many instances so little characteristic as regards its onset, the character of the eruption and the slight desquamation, that the diagnosis was considered doubtful by the attending physician. But there were enough typical cases to make it clear in my own mind that we had to do with true scarlet fever though in an exceedingly mild form. This opinion, I think, was shared by the majority of physicians. During November and December only 3 deaths were reported among 56 cases. In very many instances the initial symptoms, including the sore throat, were very slight, the eruption not at all well marked, and the desquamation far from copious and entirely completed within two weeks. This being the character of the disease, it was not recognized by the attending physician in some cases, and in some no physician was called. In doubtful cases the family often feel aggrieved if the physician reports to me, but this he is required to do by law, and I am always ready in such instances to be called upon to assume the responsibility of establishing the diagnosis, not that advice may be needed by the attending physician, but that a public officer rather than the medical attendant may bear the ill-feeling on the part of the family, which sometimes exists.

The following table gives the results of my observations during the past four years, concerning certain points in the etiology and prevention of scarlet fever. This table does not include all the families and cases, as a considerable number pass from observation through removals or otherwise. But a large proportion and a fair average are represented :

	1887.	1888.	1889.	1890.	Total.
Number of families in which there was more than one susceptible child.....	232	244	73	66	615
Number of these in which there was a second case... ..	130	147	30	27	334
Number of susceptible children in all the above families..	986	827	242	215	2,270
Number of these children who were attacked.....	452	511	126	105	1,167
Number of additional families with susceptible children in the house where the disease appeared.....	112	128	18	15	273
Number of susceptible children in these families.....	381	354	34	30	799
Number of these additional families attacked.....	27	16	0	2	45
Number of children in these families attacked.....	58	21	0	2	81
Number of families where inoculation was practiced.....	87	99	36	38	260
Number of instances in the above families where the disease spread beyond the first case	44	64	12	15	135

	1887.	1888.	1889.	1890.	Total.
Number of susceptible children in these families.....	218	496	191	132	1,037
Number of these children who were attacked.....	148	319	56	65	588
Number of tenements fumigated where there were other families with susceptible children in the house	49	56	10	4	119
Number of the above where the disease spread to other families in the house.....	5	5	0	0	10
Number of instances where susceptible children were at once removed.....	24	18	10	9	61
Number of instances where they were attacked on their return.....	3	1	0	0	4

The figures for 1890 do not differ in any marked degree from those of preceding years. There was, perhaps, slightly less tendency for the disease to spread in 1888 and 1889 than in the preceding two years, but the figures are too small to be of much value, and it would be a question whether such improvement should be attributed to greater precautions, or to a milder form of the disease. The question of the value of inunction and disinfection is of much interest. As in previous years inunction as practiced here does not seem to be of any value in restricting the disease to the initial case. As regards disinfection, the disease is not more than half as liable to spread beyond the first family to others in the house where disinfection is done as where it is not done. It is to be noted that during the last year the disease has been confined to the family where it first appeared in every case in which the rooms were disinfected by this department, and that it is during this period that steam disinfection as well as sulphur fumigation has been employed. But as persons who ask for disinfection are apt to be especially careful in all other respects, it is unsafe to attribute too much to the disinfection. This is particularly to be remembered in view of the unsatisfactory nature of the disinfection which will be referred to in another place.

The following table shows the number and percentage of persons of different ages exposed to scarlet fever who contracted it and also the number who did not. When I began to collect these facts the inspector was not careful to obtain the age in every case, so that until 1890 only a portion of the cases are contained in the table :

SCARLET FEVER.

AGES.	CASES.				NUMBER EXPOSED.				Ratio of Cases to Number Exposed.
	1887-88.	1889.	1890.	Total.	1887-88.	1889.	1890.	Total.	
Under 1 year.....	21	7	1	29	105	11	1	117	24.7
1	27	9	3	39	75	11	7	93	41.9
2	86	14	8	108	156	21	16	193	55.9
3	86	13	9	108	159	18	13	190	56.8
4	83	21	12	116	138	35	13	186	62.3
5	71	11	9	91	169	14	14	197	46.2
6	83	18	12	113	148	21	19	188	60.1
7	80	13	10	103	131	20	18	169	60.9
8	61	7	15	83	125	18	25	168	49.4
9	55	6	13	74	117	31	18	166	44.5
10	35	6	10	51	77	13	16	106	48.1
11	37	4	2	43	82	14	8	104	41.3
12	24	5	5	34	75	14	15	104	32.6
13	20	4	9	33	66	7	10	83	39.7
14	15	4	2	21	53	12	11	76	27.6
15	12	2	4	18	52	9	6	67	26.8
16	9	2	1	12	32	4	11	47	25.5
17	5	2	1	8	25	6	2	33	24.2
18			4	4	1	1	8	10	40.0
19	3	2	1	6	13	2	1	16	37.5
20	4	2	2	8	10	4	4	18	44.4
Adults.....	36	3	3	42	52	4	50	106	39.6
Total.....	853	155	136	1,144	1,861	290	286	2,437	46.9

DIPHTHERIA.

The number of deaths from this disease in 1890 was slightly less than in the preceding year, but the number of cases was almost the same. The number of cases, however, is not determined as accurately as in scarlet fever, for the diagnosis of diphtheria cannot be made with such certainty as in the latter disease. The following table on page 120 shows the cases and deaths from diphtheria for each month during the last six years, and the ratio of deaths to cases during the last seven years.

The table on page 121 shows the number and percentage of persons of different ages exposed to diphtheria who contracted it and also the number who did not.

DIPHTHERIA.

AGES.	CASES.			NUMBER EXPOSED.			Ratio of Cases to Number Exposed.
	1889.	1890.	Total.	1889.	1890.	Total.	
Under 1 year.....	3	10	13	23	36	59	22.0
1	13	11	24	23	20	43	55.8
2	23	29	52	32	42	74	70.2
3	18	26	44	36	40	76	57.9
4	23	24	47	32	39	71	66.2
5	27	21	48	37	38	75	64.0
6	23	19	42	39	29	68	61.7
7	17	14	31	35	34	69	44.9
8	14	19	33	25	33	58	56.9
9	10	13	23	25	27	52	44.2
10	13	13	26	22	27	49	53.0
11	11	6	17	19	20	39	43.6
12	15	12	27	28	25	53	50.9
13	4	4	8	9	19	28	28.5
14	3	8	11	13	20	33	33.3
15	4	2	6	9	8	17	35.3
16	2	9	11	6	24	30	36.6
17	2	3	5	8	4	12	41.6
18	3	4	7	6	8	14	50.0
19	2	.....	2	5	3	8	25.0
20	2	2	4	4	5	9	44.4
Adults.....	36	49	85	267	485	752	11.3
Total.....	268	298	566	703	986	1,689	33.5

Diphtheria was not confined to any one section of the city nor to any one season. There were, however, some instructive instances in which the contagion could be directly traced. Thus, at No. 63 ——— avenue, there was a case on August 7th. Children living at No. 23 visited at this house and the disease appeared among them on the 12th. At two other houses the disease also broke out at about the same time, and in each instance its source was the direct contact of the children. In these four houses there were eighteen cases with two deaths.

At another time a school girl was sick with diphtheria and returned to school as soon as she was able, and shortly afterwards the girl who sat next to her was taken sick, though there was no diphtheria in the neighborhood or in the school so far as known. The first of these two cases was not reported to this department.

In one case of diphtheria the house was fumigated and the bedding subjected to steam disinfection. Several weeks afterwards some clothing from the house was sent to another family and handled by a child for a few moments only, and two weeks afterwards this child was taken sick with diphtheria. The clothing was not subjected to disinfection by steam. Every effort was made by the families to prevent contagion, and it is of course not certain that it occurred in the manner above referred to, though it is possible.

At the St. Aloysius R. C. Orphan Asylum a case was reported May 10th. The child was at once completely isolated, as is the custom in that institution, and in a few days was carried to Attleboro. No other case occurred among the 215 children in the institution. The child had not been out of the asylum for a long time and the source of the contagion could not be found. The methods of isolation and disinfection successfully employed in this asylum were noted in connection with diphtheria in my last report.

The following table shows certain interesting facts in the natural history of this disease :

	1889.	1890.	Total.
Number of families in which there was more than one child.	121	112	233
Number of these in which there was more than one case.....	47	42	89
Number of children in all the above families.....	472	422	894
Number of these children who were attacked	231	191	422
Number of additional families with children in the same house... ..	38	59	97
Number of children in these families.....	95	167	262
Number of these additional families attacked.....	7	11	18
Number of children in these families attacked	11	14	25
Number of tenements which were fumigated where there were other families with children in the house.	9	14	23
Number of instances of the above where the disease spread to other families in the house.....	1	4	5
Number of children who were at once removed.....	26	28	54
Number of instances where they were attacked on their return.....	0	2	2
Number of those exposed who had had a previous attack.....	51	38	89
Number of above attacked.....	25	8	33

The figures do not differ essentially from those of last year, nor from the figures given in the scarlet fever table. There is no evidence to show that disinfection prevents the spread of the disease; in fact, the figures indicate quite the reverse, but doubtless this is simply a chance result due to the small number of cases. In twenty-eight instances in 1890 when well children were promptly removed, in only two were they taken sick on their return. In one of these the child was away only two weeks, and in the other, ten days. During the two

years 1889-1890 there were fifty-four instances of such removals and with only the two unfortunate results just referred to. The average duration of the removal in these fifty-four cases was about two weeks. In both of the two instances of subsequent infection above mentioned the house had been disinfected. In one of these the child was not taken sick until about two months after it returned. Meanwhile it lay much upon a sofa which had been used by the first case and which had been in the room when fumigated with sulphur, but had not been subjected to any other disinfection. In the other case the child had been away ten days, until the first case was supposed to be well. She then returned and was taken sick in three or four days. The only point in which the figures in the above table for 1890 differ much from those of 1889 is in the last two items. In 1890 the proportion of those who had a second attack was much less than in the preceding year.

TYPHOID FEVER.

The following table shows the number of cases and deaths for each month during the last six years, and the number and ratio of cases and deaths each year during the last seven years :

Very little is to be noted in regard to typhoid fever except that there were fewer deaths than in any previous year. Of the 100 cases, 10 were undoubtedly due to contagion from other cases in the same house; ten more either certainly or very probably contracted while persons were out of the city; of the others, nine drank well water. In one instance there were six cases in one family. Here the house was on a farm in the outskirts and the drinking water was obtained from a well near the house. This was polluted by slops and wash water, and even after the first case occurred and the occupants were particularly warned, they washed the clothing and bed linen soiled by the patient and threw the water on the ground where it would be certain to find its way into the well. There are various ways in which it seems to me possible that typhoid fever cases may occur in cities. First they may be due to a pollution of the public water supply. They may also be due to the use of contaminated wells, but this of course is rare, except in the suburbs. Then a number of cases are each year brought in from the country or are contracted while people are away for the summer. The remainder of the cases, it seems to me, are most likely to be caused in one of two ways, First, contaminated food or drink may be brought in from the country. Milk is known to be an excellent carrier of disease producing germs, and in this city has several times been found to be the vehicle for the introduction of the poison of typhoid. Vegetables and fruit that are eaten raw are also liable to become contaminated while they are growing in country fields or while they are being prepared for market. As night soil is often used as a fertilizer by market gardeners, there is no reason why the bacillus of typhoid fever may not thus be spread on the fields and infect the various products of the garden. Indeed, it has been demonstrated that stalks of celery may thus be made the carriers of the poison unless they are washed in the most thorough manner. Secondly, the typhoid bacilli may find lodgment in some yard or refuse pile, and, growing there, be carried by currents of air on to milk or food standing near an open window. As a result the food is infected and disease results. It is possible that the poison discharged into drains, sewers and cess-pools may develop there, and, issuing again, contaminate food in the manner above described. But I think that it is not nearly so likely to come from drains as from places freely exposed to the air, for microbes are not readily given off from moist surfaces like the interior of drains, and the "sewer gas," so called, coming from them, though impure and unhealthy enough, can but rarely be the carrier of disease germs. On the other hand, if the bacilli of typhoid fever gain a foothold out of doors, the material on which they grow may become dried in a few days or hours even, under a hot sun, and considerable particles may be carried about by the winds. The dust of the streets and yards is very much more likely to be the carrier of specific contagion than is the air of sewers or cesspools. The latter on the other hand produces those general or constitutional symptoms which are always noticed when human beings are deprived of a sufficiency of pure air. While then we might expect a general cleansing of a city to be accompanied by a diminution of typhoid fever, and *vice versa*, we should hardly expect to be able in many instances to attribute a case of this disease to local surroundings, and the facts referred to in the tables on pages 113-114 bear this out, for we do not find that defective plumbing and filthy surroundings are any more prevalent where typhoid fever occurs than in other houses in the city.

DISINFECTION.

Disinfection after contagious diseases in the city is not compulsory and is only done at the request of the family. It is done by this department without charge. The disinfections in 1888 numbered 180; in 1889 there were 92, and last year 93. Of these, 23 were for scarlet fever and 70 for diphtheria. Fumigation by means of sulphur dioxide is still employed, but I am more and more convinced that its only usefulness is to ensure a thorough airing and cleaning of the rooms afterwards. In my last report I gave some figures which seemingly indicated that such fumigation was of considerable value. An error was made in these figures, but as corrected the results are about as favorable as regards scarlet fever, for the disease spreads beyond the first family in the house when disinfection is done in 8 per cent., and in 22 per cent. of the cases where there is no disinfection. In diphtheria the result was reversed, for under similar circumstances the disease spread in 22 per cent. of the cases where disinfection was done, and in 17 where it was not done. It is to be noticed that, in addition to the sulphur fumigation, steam disinfection was done in most of the cases in 1889, and in all in 1890 for both diseases.

As I have before stated, the figures involved in the tables on pages 117 and 122, particularly the latter, from which these comparisons are made, are not large enough to make certain the deductions which might be drawn from them and render it impossible to judge truly from them of the efficiency of sulphur fumigations. It is possible, though I must say I think it improbable that the poison of scarlet fever is easily destroyed by sulphur dioxide. The assumption is too often made that this poison is a living organism, some form of bacillus or micrococcus, while as a matter of fact we know nothing at all about it, and it is absurd to argue deductions as to what will or will not kill it. In regard to diphtheria, however, it is reasonably certain that the essential cause of the disease is Loeffler's bacillus, an organism which is not destroyed by sulphur dioxide. Hence while it may be admitted that sulphur fumigations may be of use in scarlet fever, they are not in diphtheria, and there is no longer any reason for employing them in that disease.

The chief carriers of contagion are carpets, bedding, woolen clothing and upholstered furniture, and even the strongest advocates of sulphur fumigation do not claim that these can be thoroughly disinfected by this means. The only way that this can be satisfactorily and surely done is by steam disinfection or by a naphtha bath. I am happy to report that we are now very well prepared for steam disinfection. During 1889 and a part of 1890 a wooden building was used for this purpose. The goods to be disinfected were placed in it and steam turned on through a two-inch pipe from the boiler used to supply power to the stone-crusher in the city yard. This worked fairly well at first, though of course no pressure could be obtained, but in the course of a year the building became so warped by the alternate steaming and drying that the steam escaped freely on all sides, and could not be supplied in sufficient quantity from the boiler. I have since had arranged a wrought-iron chamber. A second-hand bleach kier was purchased and placed inside the old wooden building and the two-inch pipe connected directly with the centre of the rear end. The front end is closed by a cast iron door one inch thick with six ribs on the inside. It swings open on a hinge,

and is closed against a rubber gasket by means of twenty swinging bolts three-fourths of an inch in diameter. The chamber is of three-eighths iron and is nine feet long, excluding the "dish" of the rear end, which is about one foot more. A few inches from the bottom is an open floor of joist, and beneath this a few coils of one-inch pipe with live steam connection for heating. At the bottom is a small cock to draw off the water of condensation, and at about the level of the floor and near the front is a two-inch blow-off. There is also a pressure gauge. The cost of the apparatus was \$304.10. I have also had made a movable wagon-body of galvanized iron pipe. This I have had covered twice with canvas, but I do not think it is a very good material, as it is speedily discolored and is not sufficiently impervious to rain and the water of condensation inside the disinfecting chamber. I now have a rubber cover to go over the canvas one. This wagon body was first made of black iron pipe wound with canvas, but it soon rusted and had to be replaced by galvanized pipe. It cost \$56.99.

My method is to send the wagon to the house and remove the goods in it to the disinfecting chamber, which has been previously heated by means of the coil of pipe in the bottom. Pieces of canvas are thrown over the goods while in the chamber as an additional protection against moisture. The wagon body with its contents is then rolled into the chamber, and the door tightly closed by screwing down the nuts on the bolts. The blow-off is then opened and steam turned on until the air is expelled, when the blow-off cock is closed and the pressure rises. It is held from fourteen to sixteen pounds for one hour. The steam is shut off and the blow off opened, and after a few moments the wagon body is rolled out. The iron chamber should, I think, be covered with some non-conducting material as hair-felt, which would prevent much of the condensation and facilitate the warming of the chamber. In many European cities where steam disinfection is done, one set of men bring the goods to the disinfecting house and put them in the chamber, and another returns them to the house. I pursue a different plan which is practically as safe. The man who removes the infected goods from the house wears a light coat and overalls which he removes at the disinfecting chamber, and disinfects with the goods. The table on the next page gives the results of some experiments, made to determine the effectiveness of the disinfection. The tests were made during the course of actual every day work and the test tubes were placed in the most unfavorable position among the materials disinfected. In some cases gelatine tubes were inoculated with the *streptococcus pyogenes aureus*, and in others, pieces of cloth were rubbed upon the hands of scarlet fever patients. In the last six tests glycerine agar was the nutrient material employed, in the other gelatine. The interior of a test tube packed between mattresses or rolled up in a feather bed is a very difficult place for heat to penetrate, but the experiments show by the sterilization of their contents that it does do so, and furthermore, the water of condensation in the tubes shows that the steam itself actually penetrates the cotton plug and displaces the contained air. The temperatures in the table were obtained by putting a self-registering thermometer near the test tubes.

There is no question but that this method of disinfection is effectual, provided it be properly carried out. But it requires considerable practice and experimentation to determine just what the essential conditions are which must be observed, and what precautions must be taken to prevent any injury to the goods.

No. of feet.	No. of tubes used.	Result.	Temperature in chamber.	Material used.	Conditions.	Steam pressure.	Time in chamber.
1	2	No growth	.....	Streptococcus pyogenes aureus.....	.....	15 lbs.	30 m.
2	3	"	107°	"	Under a mattress.....	"	25 m.
3	1	"	109°	"	Under a blanket.....	"	25 m.
4	1	"	85°	"	Under three mattresses.....	"	25 m.
5	1	"	85°	"	Under three carpets.....	"	25 m.
6	1	"	112°	Cloth rubbed on hand of scarlet fever patient.....	Inside of feather bed.....	"	56 m.
7	2	"	112°	Cloth saturated with septic material.....	"	"	56 m.
8	2	"	111°	Streptococcus pyogenes aureus.....	Under one mattress.....	"	22 m.
9	2	"	.....	Dirty rags.....	.....	"	45 m.
10	2	"	118°	Cloth rubbed on hand of scarlet fever patient.....	Under two mattresses.....	"	1 h.
11	2	"	88°	"	Under six layers of carpets.....	"	1 h.
12	2	"	114°	"	Under a carpet.....	"	1½ h
13	2	Growth....	91°	"	Under two carpets.....	"	1 h.
14	2	No growth.	101°	Septic organisms.....	Agar melted, under mattress.....	"	1 h.
15	2	"	116°	"	Agar melted, under carpet.....	"	30 m.
16	2	"	117°	"	Agar melted, under mattress.....	"	30 m.
17	2	"	70°	"	Agar melted, rolled up in pillow and comforter.....	"	30 m.
18	2	"	90°	"	Agar melted, in leather bed.....	"	30 m.
19	2	Growth....	96°	"	Agar not melted, in leather bed.....	"	30 m.

But it has been suggested that there is some danger in transporting the goods through the streets. I cannot think, however, that this can be of any moment. The danger of any morbid material being carried from the wagon with its canvas cover tightly tied down behind must be very small, and the chance of any such escaping particles infecting any one in the open air is much smaller. As opposed to this, we have the alternative of leaving the bedding and carpets with the family, in which case they cannot be disinfected, and will be sure to be aired or cleaned in the back yard, and even after that for a considerable time will be a source of danger to all persons visiting the house.

The great majority of textile fabrics and bedding can be disinfected by steam in this way without being injured, but occasionally a very delicately colored silk or woollen dress is discolored by moisture, and sometimes in cotton goods dyed with cheap colors the colors run to some extent. But, after all, if care is taken it is rare for anything to be injured. Of course it is impossible to prevent the goods from being creased by the process so that garments require pressing afterwards.

Besides the disinfection by steam of carpets, mattresses, pillows, comforters, etc., and the fumigation of the sick room and its subsequent airing, I urge the cleansing of the sick room with corrosive sublimate, in accordance with the directions given in my last report, and the boiling of all linen and cotton goods that can be washed without injury. Articles made of wood and upholstered furniture cannot be disinfected in this way, as the glue is softened and the polished surface is injured. I have them carried in the disinfected wagon to a firm here which places them for twenty-four hours in a bath of naphtha, a process which I know destroys all bacterial life. Two firms in the city do this work and the goods are delivered to either at the request of the owners. The owners pay the cost of this disinfection, but the articles are transported without charge.

VACCINATION.

During the year 1890 the number of persons vaccinated was 1,439. The only public vaccination has been at the City Hall, on Saturday afternoons. Humanized virus only is employed. The number of transfers in 1890 was 51, making the total number of transfers since 1868, when an accurate record was begun, 400. The number of certificates of vaccination issued was 1,765. The following table gives the number of persons vaccinated and the number of certificates issued during each period of five years from 1856 to 1880, and during each year since that time :

YEAR.	Persons Vaccinated.	Certificates Issued.
1856-1880.....	24,142	32,585
1881.....	2,307	1,655
1882.....	1,694	1,690
1883.....	1,385	1,601
1884.....	1,187	2,725
1885.....	17,034	1,776
1886.....	625	1,856
1887.....	917	1,437
1888.....	894	1,676
1889.....	1,136	1,344
1890.....	1,438	1,765
1856-1890.....	52,709	50,110

SWILL.

During the year the swill has been collected by Messrs. A. H. & J. Barney under contract with the city, dated April 18, 1889. This contract is for ten years, from May 1, 1889. The payment for the service is 15½ cents per annum for each person in the city, the population of the city to be estimated for that purpose each year by the city registrar. At this rate they were paid \$1,640.42 each month to May 1, 1890, and \$1,679.16 per month since that date.

The contractors continue to collect the swill in the same satisfactory manner in which they undertook the work. They employ in the business fifteen two-horse teams.

As was stated in my last report they dispose of the swill to parties whose plant is on the cove lands and who make from it a fertilizer and grease. These works have been in operation a year, but it was soon found that they were not adequate to consume all the swill during the summer and autumn, so that Messrs. Barney have made arrangements by which the surplus amount is shipped up the Springfield railroad and fed to hogs. There has been at times considerable complaint of the nuisance caused by the garbage works, but it has been due, I think, entirely to carelessness in delivering the garbage, by which on several occasions an amount considerably more than could be taken care of by the apparatus has been allowed to accumulate on the premises. I trust and believe that there will be no further trouble. There is no reason that I can see why the process in itself should be the cause of any offence. The following are the number of complaints made at this office during the past four years in regard to the collection of swill :

1887.....	329
1888.....	299
1889.....	231
1890.....	241

The number of special permits granted in 1890 to remove swill from hotels and restaurants was four. In 1889 the number was fifteen ; in 1888 it was seventeen.

A man was stationed on the dump on the cove lands nearly the entire year, but with less satisfactory results than in previous years. A much larger amount of offensive material was dumped than usual, and it was deposited anywhere and everywhere over the whole of that large area, so that it was impossible to keep it covered at all times. I trust that I shall be able to get a more efficient man there for the ensuing year.

NIGHT-SOIL.

The number of licenses granted during the past seven years was as follows :

1884	165
1885	168
1886	145
1887	157
1888	117
1889	119
1890	116

The character of the parties who do this work is growing worse each year, and the complaints of citizens more numerous. The time has come when some change should be made. Either the work should be done by the city or else one, or, at least, only a limited number of licenses issued to responsible parties. The night-soil should all be delivered at one or two fixed points where the least nuisance would arise and be carried out of the city on the cars or in barges. The price of the work should be fixed by law and an officer be detailed to record the amount delivered each day at the dumping stations.

NUISANCES.

During the year 406 complaints were made at this office. Of these 281 were well founded, while 125 were not. In addition to these complaints 138 were received through the police, making 544 complaints received from the public during the year. Many of these, however, had already received attention when the formal report reached this office. The nuisances abated during the year were as follows :

Privy-vaults full and offensive.....	1,413
Cesspools full and offensive.....	174
Defective vaults and cesspools.....	104
Uncovered vaults and cesspools.....	48
Cesspools and vaults leaking on to adjoining estates.....	44
No vault to privy.....	2
No cesspool on estate.....	14
Cesspools and vaults leaking into cellar.....	37
Defective waste and drain pipes.....	290
No traps.....	99

Filthy yards.....	504
Filthy water flowing into the street.....	44
Defective water closets	14
Filthy cellars	53
Privy vaults removed.....	30
New privy vaults and cesspools built	4

When a nuisance exists on any premises in the city, a letter is at once sent to the owner to abate it, and if he does not do it within a reasonable time the case is reported to your board for action. In 1890 your board issued 248 orders under form A, to abate nuisances, and 4 under form C, to vacate tenements. When your board is not in session, I have authority, under Chapter 495 of the Public Statutes, to issue orders to abate certain nuisances, and during the year 34 were issued from this office.

DRIVEN WELLS.

There are quite a number of manufacturing establishments in the city at which driven wells have been sunk for the purpose of obtaining water for drinking, washing, and for use in bleacheries and dye-houses. I have been asked several times in regard to this water as to whether it was suitable for drinking. I have therefore made a number of tests of these wells, the results of which will be given on another page. These wells are mostly situated in the valleys of the Moshassuck and Woonasquatucket and Providence rivers. Almost without exception they penetrate sandy and gravelly strata to the depth of 100 to 200 feet. The water supplied by them is mostly very palatable, though in one or two instances it proved to be so impregnated with sodic chloride or magnesium or iron salts, so that it is totally unfit to drink. The east side of the city is built upon a hill composed chiefly of ledge-rock, slate and graywacke, with layers of coal, and covered for most part with the glacial drift, consisting of clay, sand, boulders and angular stones. To the east of the hill on the borders of the Seekonk river, and also along the shore from India Point to Fox Point, the ledge is perhaps from fifty to one hundred feet below the water level, and the strata lying upon it are stratified drift, consisting of alternate layers of varying thickness of sand, gravel and clay. The only wells that I know of that supply any considerable amount of water are near India Point. One of them, seventy-six feet deep, furnishes water of apparent purity; the other, much deeper, supplying water strongly impregnated with mineral substances, said to be chiefly sulphate of magnesia. Smith's Hill and the region on the west side, embracing a greater part of the fourth, fifth, sixth, seventh, eighth and ninth wards, is composed of this same stratified drift, the surface except where eroded by the rivers and brooks, forming a nearly level plain. The ledge underlying this is probably in most cases at a considerable depth varying from 125 to 200 feet. To the north and west the ledge again approaches the surface and projects above it in the hills, the soil being unmodified glacial drift. This is seen in Wanskuck in the rising ground west of Smith's Hill, at Mount Pleasant, and just over the line in Johnston. Nearly all the successful wells have been driven in the river valleys, which are filled with the stratified layers of sand, gravel and clay. The tests of

the water made were biological, for I had no appropriation which could be devoted to a chemical analysis. The latter, though interesting would, considering the results obtained by the biological tests, not be absolutely necessary to form a correct judgment as to the potability of the water. In several instances I found that chemical analyses had been made of the waters in question. In only one of these, however, was the albuminoid and free ammonia estimated. That was the water in Nos. 9, 10, 11 and 12 of the table, and the analysis was by Professor Appleton, of Brown University, as follows:

The large figures signify parts (by weight) in one million parts of water (by weight).

The smaller figures signify grains per American gallon of water (weighing 58,372.2 grains).

Total Residue.	Organic and Volatile Matter.	Mineral Matter.	Common Salt.	Albuminoid Ammonia.	Ready-formed Ammonia.
173	66	107	3.12	.08	.16
10.098	3.853	6.245	.182	.0046	.0093

Such an analysis is not entirely satisfactory and would indicate the necessity for an investigation of the source of the water and its living contents. But when we find that four biological tests showed only 6-3-3-14 organisms respectively, and that, too, under unfavorable conditions as regards taking samples, it may fairly be inferred that the water may be safely used for drinking. The biological tests being very satisfactory, it is not of much moment what the chemical analysis of the water is in these particular instances. It seemed to me likely that the water in these wells must be derived from the rainfall on the thickly-inhabited portions of the city or its suburbs, in which case it must certainly become more or less polluted on or near the surface of the ground. The practical question is, is the gravel and sand through which it flows on its course to the wells sufficient to remove the living organisms from the water, for we have no reason to believe that water is injurious if it is free from micro-organisms unless in exceptional cases when it has a very large amount of dissolved organic matter, consisting of ptomaines or similar substances. The culture tests in these experiments were made by Dr. Swarts and myself, and were made in the ordinary nutrient gelatine. Sometimes plate cultures were made in the laboratory, the water in every instance having been collected in sterilized flasks only an hour or so before the cultures were made. In other cases cultures were made on the spot in flat glass bottles or in Esmark tubes. This is a very satisfactory method, as it reduces to a minimum the chance of infection, and at large manufacturing establishments the ice and hot water or other necessities are readily and willingly furnished. In all cases one c. c. of water was used for the test. The results of the examination are shown in the table on the following pages.

Driven wells were examined in twenty-three different locations. In some places several wells were connected together in a "gang,"—in one instance as many as twenty-two. So that in all, tests were made of water from seventy-two wells. At only five places, including seven wells, did the number of organisms exceed 30 per cubic centimetre. In five of these the wells were in the midst of an old and thickly populated district and were sunk to or into a slaty ledge. In seven places, including eighteen wells, the water was completely sterile. In two others, including twenty-three wells, only one organism was found in a single test each, the other tests showing none. In the remainder of the wells the organisms varied in the different tests from one to twenty-eight.

I should say that the deep-driven wells of this city, unlike the majority of the dug shallow wells, are likely to give good drinking water, but that in each case it would be necessary to examine the water, the well and its surroundings, before pronouncing upon it.

No. of test.	Duration of Growth.	No. of Colonies.	Method of Culture.	Manner of Collecting Specimens.	Description of Well.
1	2 days..	1,406	Plate culture.	Taken from tap about 200 feet from well, pump running steadily.	30 feet deep.
2	"	757	" ..		
3	"	1,048	" ..		
4	11	3	" ..	From pipe 100 feet from well; pump started up a few minutes before test; had not pumped for several hours.	200 feet deep.
5	"	10	" ..		
6	"	4	" ..		
7	"	320	" ..	"	85 feet deep.
8	"	1,392	" ..		
9	5	6	In flat bottles.	Cock put on for occasion in pipe near well; pumped 10 hours per day, but stopped to put on cock.	Three wells 135 feet deep; two of them passed through slate rock, apparently ledge, 30 to 40 gallons per minute.
10	"	3	" ..		
11	"	6	" ..	Tap distant 250 feet from well; tap continually open and pump working.	
12	"	14	" ..		
13	8	0	Plate culture.	At mouth of well, flowing naturally.		114 feet deep; has been flowing 14 years, 20 gallons per minute.
14	"	0	" ..		
15	"	0	" ..		
16	5	0	" ..	"	Flows about 20 gallons per minute.
17	"	0	" ..		
18	"	0	" ..	"	Same well as 13, 14, 15.
19	"	0	" ..		
20	3	3,048	" ..	Not used often. From hand-pump after few minutes' use.	196 feet deep; the lower 50 feet is in rock. Water is offensive when not used.
21	"	3,744	" ..		
22	5	605	" ..	After pumping half an hour.	
23	5	776	In flat bottles		Same as No. 23.

No. of test.	Duration of Growth.	No. of Colonies.	Method of Culture.	Manner of Collecting Specimens.	Description of Well.
24	5 days..	34	Plate culture.	Steam pump had been run half an hour. Taken from open end of pipe 80 feet from well.	Three wells.
25	"	56	" ..		
26	"	63	" ..		
27	"	74	" ..		
28	"	2,086	" ..	Taken at pump after running 15 minutes.	74 feet deep.
29	"	1,982	" ..		
30	"	731	" ..	At pump after running several hours.	
31	"	643	" ..		
32	5	14	" ..	From tap 20 feet from well, pumping continually.	71 feet deep; 40 gallons per minute.
33	"	17	" ..		
34	"	6	" ..	Taken at pump over well.	New well; pumped 3 days; sand still in water, 110 feet deep. Two wells yielding together 55 gallons per minute.
35	"	1	" ..		
36	3	0	" ..	From tap 250 feet from well, pumping continually.	
37	"	0	" ..		
38	5	2	" ..	From pump.	
39	7	0	" ..	Hand pump over well, used only occasionally.	65 feet to ledge and 140 feet through carboniferous shale and plumbago.
40	"	0	" ..		
41	3	22	" ..	At mouth of well.	6-inch well flowing a small stream.
42	5	0	Tube culture.		
43	6	1	In flat bottles on the spot.	At pump running continually.	22 wells yielding 1,500,000 gallons in 10 hours.
44	"	0	" ..		
45	"	0	" ..		
46	5	0	Tube culture.	At well.	Flowing well, small stream.

No. of test.	Duration of Growth.	No. of Colonies.	Method of Culture.	Manner of Collecting Specimens.	Description of Well.
47	5 days..	0	Tube culture.	At well.	Flowing well, small stream.
48	"	0	" ..	"	Flowing about 10 gallons per minute.
49	"	0	" ..		
50	"	10	Plate culture.	Near pump, after pumping a few minutes.	200 feet deep through sand.
51	"	8	" ..		
52	"	0	" ..	From pump used continually.	23 feet.
53	"	0	" ..		
54	6	4	" ..	From pump near well.	
55	3	18	" ..	From basin ; probably contaminated.	Four wells 60 to 70 feet deep flowing into basin.
56	8	0	In flat bottles on the spot.	From cock 60 feet from well ; pump running night and day.	Four flowing wells 90 to 100 feet deep and yielding by pumping 300 gallons per minute.
57	"	0	" ..		
58	"	0	" ..		
59	"	4	" ..		
60	6	28	Plate culture.	From tap 150 feet from well.	Nine wells about 165 feet deep, yielding by pumping 280 gallons a minute.
61	"	17	" ..		
62	7	0	Tube culture.	Taken at pump short distance from well, running continually.	117 feet deep, 40 gallons per minute by pumping.
63	"	0	" ..		
64	"	0	" ..	Taken at pipe 80 feet from well, running continually.	Dug well 20 feet deep.
65	6	0	" ..		
66	"	1	" ..		
67	2	1,708	Plate culture.	Drawn in bucket and poured through wooden spout.	Dug well 15 feet deep.
68	"	781	" ..		
69	3	132	Tube culture.	Drawn in bucket.	

PAWTUXET WATER ANALYSES FOR 1890.

The following analyses of the Pawtuxet water were made by Prof. John H. Appleton, of Brown University.

Two analyses were made each month.

The figures signify parts (in weight) in one million parts of water (in weight).

MONTHS.	Total. Residue.	Mineral Matter.	Organic and Volatile Matter.	Common Salt.	Albuminoid Ammonia.	Ammonia.
January	41 38	28 27	13 11	4.68 4.99	.19 .22	.02 .02
February	37 37	24 23	13 14	4.37 1.87	.12 .20	.02 .02
March	37 33	24 21	13 12	2.50 3.12	.22 .18	.04 .02
April	29 30	16 18	13 12	1.56 3.43	.14 .20	.04 .02
May	32 35	16 13	16 22	1.87 4.056	.24 .24	.00 * .02
June	32 35	18 19	14 16	2.50 2.50	.24 .24	.06 .06
July	42 37	21 21	21 16	3.43 4.056	.26 .28	.06 .06
August	50 47	27 32	23 15	4.368 5.304	.28 .30	.10 .06
September	55 52	31 27	24 25	3.74 1.87	.34 .36	.02 .12
October	55 55	35 32	20 23	4.68 4.90	.32 .34	.06 .04
November	41 43	25 25	16 18	4.99 3.12	.24 .28	.03 .04
December	37 44	24 29	13 15	4.06 4.99	.14 .24	.02 .02

AVERAGES FOR FIFTEEN YEARS.

The figures signify parts (in weight) in one million parts of water (in weight).

YEARS.	Total Residue.		Mineral Matter.		Organic and Volatile Matter.		Common Salt.		Albuminoid Ammonia.		Ammonia.	
	Average.	Maximum.	Average.	Maximum.	Average.	Maximum.	Average.	Maximum.	Average.	Maximum.	Average.	Maximum.
1876	50	62	30	44	20	30	5.72	8.50	.24	.40	.06	.11
1877	43	56	24	32	19	24	5.46	7.09	.23	.32	.06	.12
1878	37	54	21	34	16	24	5.47	8.51	.17	.25	.04	.10
1879	38	59	24	43	14	24	5.73	10.83	.17	.23	.05	.10
1880	45	70	29	49	16	22	6.35	8.76	.22	.26	.02	.14
1881	41	55	26	40	15	21	4.95	8.07	.21	.28	.02	.05
1882	43	59	27	42	16	25	4.43	6.60	.25	.38	.03	.08
1883	47	64	30	47	17	24	4.60	7.95	.27	.36	.04	.14
1884	45	72	29	43	16	29	4.79	7.33	.19	.32	.04	.14
1885	46	63	30	46	16	24	4.20	6.74	.22	.30	.05	.20?
1886	46	59	29	44	17	25	4.14	5.95	.22	.30	.05	.14
1887	42	63	24	40	17	25	4.15	6.84	.21	.36	.04	.10
1888	40	59	23	40	17	30	3.50	5.62	.19	.30	.05	.14
1889	38	52	22	29	17	27	2.86	4.99	.21	.30	.04	.10
1890	41	55	23	35	16	25	3.62	5.30	.24	.36	.04	.12
Average	42.7	72	26	49	16.5	30	4.66	10.43	.21	.40	.04	.20

REPORT OF THE MEDICAL INSPECTOR, 1890.

The number of such contagious diseases as receive the attention of this department during the year 1890 was as follows :

	Typhoid Fever.	Scarlet Fever.	Diph- theria.	Total.
Number of premises inspected.....	90	94	207	391
Extra number of cases in same house.....	1	13	32	46
Total number of cases.....	91	107	239	437
Change in diagnosis.....	1	12	13	26
Actual number of cases.....	90	95	226	411
Number of cases in 1886.....	105	226	96	367
“ “ 1887.....	66	848	307	1,221
“ “ 1888.....	403	361	230	994
“ “ 1889.....	193	162	303	748

I wish to repeat my assertion of last year that the diseases of measles and whooping cough are of sufficient severity and productive of so much suffering and so many deaths that some action is called for from this department to control the spread of these diseases. I believe that much can be done in this direction, the control of school attendance being a valuable factor if enforced, which is not done at the present time, since the return to school of scholars exposed to these diseases is dependent upon the ignorant and interested representations of the parents, and not upon the examination of the patient nor the judgment of the teachers.

Respectfully submitted,

GARDNER T. SWARTS,

Medical Inspector.

1. PAWTUCKET.
2. Health Officer by appointment, Geo. H. Stanley, M. D.
3. The Health Officer makes no report to the State Board of Health, annually or monthly, and nothing is heard from him in relation to the presence of contagious or infectious diseases, or the employment of any of the modern methods of prevention of disease.

The following from the inaugural address of Mayor A. K. Goodwin, in regard to the appointment of a Board of Health, or the duties of such a board are pertinent in this connection.

HEALTH.

The Board of Aldermen constitutes the Board of Health of this city, and to this Board all matters concerning the public health, such as nuisances, etc., are referred which the health officer appointed by the council deems necessary. The members of the Board have not the time to give to the duties of this department which their importance demands, and it has always appeared to me that the

Board of Health should be composed of men who have the time to attend to matters concerning the public health, in a thorough and efficient manner. The health of the city is of too much importance to be entrusted to men whose other duties prevent them from giving it proper attention. The health officer, to be sure, is doing all he can ; but the city is too large for one person to traverse and see that the streets are kept clear of unhealthy matter.

I am hardly prepared at the present time to state what legislation, if any, is needed to cover the entire field, as there are many questions to be considered. The inspection of plumbing is an important one. Defective plumbing is often the cause of sickness and death, and too much care cannot be given to the plumbing in all buildings, both public and private.

The abolition of cesspools where it is possible, to connect with street sewers, is another important consideration.

Now it is utterly impossible for the health officer alone to give these matters sufficient attention, and if nothing else be done, he certainly should have at least one person under his charge, whose whole time should be given to the inspection of the streets, lanes and buildings, that all filth be promptly removed, and every-thing possible done to guard against disease and its spread.

I commend the whole matter to your consideration, and trust the City Solicitor may be requested to examine the laws and see what changes are necessary to be made.

1. WOONSOCKET.

2. Health Officer, George W. Jencks, M. D.

3. There has been more or less prevalence of the following contagious or infectious diseases during 1890 :

Scarlet Fever ; general over city ; uniform through year. As to number of deaths, mortality items are reported to the city clerk. I have no means of determining the number. Measles ; general over city ; uniform through year. Whooping Cough ; centre city. Consumption ; general. Pneumonia ; general.

4. Isolation was maintained in Scarlet Fever and Diphtheria.

5. All were isolated as far as possible in above named diseases.

Various inspections of premises were made, where sickness prevailed and otherwise as to the sanitary condition of the cellars, sinks, sink-drains, water closets, cesspools, out-house privies, etc.

Personal inspection revealed general unsanitary condition as to cesspools and privy vaults, garbage in yards and filthy damp cellars in very many localities.

Sanitary inspections were made during 1890 from my own option by personal visitation.

There are locations in this city that seem to be particularly unhealthy to a considerable number of persons, and the cause can be removed if the passage of proper ordinances by city council can be secured.

I report to the city council nuisances dangerous to the public health.

No serious disease of domestic animals known to have occurred.

WASHINGTON COUNTY.

1. CHARLESTOWN.

2. Health Officer, A. A. Saunders, M. D.

3. No epidemic, or any large prevalence of contagious or infectious diseases in town during 1890, except the Influenza ; large number affected ; all locations ; January and February.

7. No sanitary inspections made during 1890 by order of the town council or from my own option.

8. Do not know of any location that seems to be particularly unhealthy to any considerable number of persons.

9. Nuisances dangerous to the public health are reported when known.

10. No serious disease of domestic animals has prevailed.

1. EXETER.

2. Health Officer—None except the town council.

3. Within my knowledge there were no epidemics or any large prevalence of contagious or infectious diseases in town during 1890. Only the usual diseases and few in number.

7. No inspection has been made, but think our sanitary condition as a town fully as good, and superior to many country towns. Have no physicians located within our town that I am aware of, yet there are a good number near,—of nearly all the schools.

8. No location in town that seems to be unhealthy.

9. I should report to the town council nuisances dangerous to the public health if necessary.

10. No serious disease of domestic animals has largely prevailed in town during the year. But rumor says a few cows of the fancy herd at the "Austin Homestead" have been sick, and one or more died from "cow-pox" so-called by some.

G. W. REMINGTON,

Member of Town Council.

1. NORTH KINGSTOWN.

2. Health Officer, Thomas W. Peirce.

3. No epidemic or any large prevalence of contagious or infectious diseases.

4. No isolation maintained of persons sick.

6. Inspections were made where sickness prevailed as to the sanitary condition of the premises. In one case where the premises were inspected it was found that the cesspool and privy were very close to house, and were full to the very top of vault. Two families lived in the house, and the other sink spout entered on the top of the ground, and nothing to prevent it from leaking into the well. There were two cases of typhoid fever at this place of which one died ; the condition of the premises supposed to be the cause.

No location that seems to be particularly unhealthy.

I should report to the town council all nuisances dangerous to the public health.

Do not know of any serious disease of domestic animals in the town.

1. WESTERLY.

2. Superintendent of Health, Henry W. Rose, M. D. Health Officer, Benj. York.

3. Contagious and infectious diseases prevailed as shown in the superintendent's report appended

4. Numerous nuisances were reported and attended to.

10. No disease of domestic animals claiming unusual attention.

REPORT OF H. W. ROSE, M. D.

To the Honorable Town Council of the Town of Westerly :

GENTLEMEN : Herewith is presented the fifth annual report of the Superintendent of Health, for the year ending May 31st, 1890

The health of the town for the last seven months, as compared with previous years, has been very favorable. June and October were the healthiest months during the year. An unusual amount of sickness prevailed during the months of January, February, March, April and May, notably "La Grippe," whooping cough and measles, each prevailing as epidemics, following in the order named. The unusually large prevalence of measles was in a measure due to the concealment of cases in families where no physician was called. I have been informed by the Principal of School District No. 1, Mr. E. C. Willard, that children of these families had persistently attended school, and in some instances until the eruption made its appearance. No little difficulty was experienced in constantly seeking out these cases by the teachers of the various grades, the children artfully resorting to falsehoods as to the nature of the disease of a brother or sister at home sick. A very perplexing feature likewise presenting itself, was that of re-admitting these children to the schools. To meet the emergency I caused the following notice to be printed in the *Tribune* : "For the benefit of parents whose children are seeking re-entrance to the schools, after having been sick with a contagious or infectious disease, I will state that the statute law of the State of Rhode Island requires that *all persons* shall give notice to the Town Council (or the Superintendent of Health) of the occurrence of any contagious disease that occurs or is present in the house in which they live, and provides that *every person violating such requirement shall forfeit twenty dollars*. It also requires of children re-entering school to present to the principal of such school a certificate, stating that complete recovery from such disease of all persons in said house has taken place, said certificate to be given by the attending physician, or the Superintendent of Health, when no physician was in attendance." From the reports received of the physicians, I have been enabled to gather the information that the disease did not prevail in a severe form.

The whole number of deaths during the year was 87—38 males and 49 females, as against 103 during the previous year, making a remarkable low death rate of 13.7 in every 1,000.

RECAPITULATION.

Under 5 years of age, 25 ; between 5 and 15, 6 ; between 15 and 25, 8 ; between 25 and 50, 17 ; over 50, 31. Of these scarlet fever claimed 2 ; typhoid fever, 4 ; diphtheria, 1 ; measles, 1 ; la grippe, 1 ; pneumonia, 4 ; consumption, 17 ; other causes, 57. As will be seen, that scourge consumption has again demanded its numerous victims.

Of contagious and infectious diseases, as reported by the physicians, there were 128 cases—scarlet fever, 8 cases ; typhoid fever, 10 cases ; diphtheria, 4 cases ; measles, 98 cases ; whooping cough, 8 cases. I have reason to believe that from the small number of cases of whooping cough and measles reported, there still remains a large percentage of unreported cases in the hands of both the physicians and the laity, which necessarily defeats the object in view.

Numerous complaints of nuisances have been reported to this office during the year, all of which have received due attention. I am unable to give a full report of the number of nuisances attended, for the reason stated in a former report, that the Health Officer has failed to record the cases attended by him. I would respectfully call attention to a class of nuisance which is developing in our midst. I refer to the dangerous and overflowing cesspool. My attention was claimed in a case where a more or less constant current of sewage found its way across the sidewalk into the gutter, and flowing down some eighty feet gained access to the middle of the street, there forming a pool. The total quantity of excrementitious products, solid and fluid, for each individual, including men, women and children, has been estimated by Dr. Parkes as two and a half ounces of the former and forty ounces of the latter discharge daily. This would give for a population of 1,000 persons, 25 tons of feces, and 91,250 gallons of urine per year. If to this is added a minimum allowance of thirty-five gallons of water per day to each individual, a complete sewerage system for a population of 1,000 persons would require provision for the discharge of 35,279½ gallons of sewage to be disposed of every day. In this estimate, storm water and accessory feeders are omitted. For this and other reasons, it is important that such measures be adopted as will secure the removal of sewerage matters from the immediate vicinage of houses as quickly as possible. I am indebted to Mr. Everett Barns, Superintendent of the Westerly Water Works, for the following information : "The Water Works are supplying 328 families, 5 hotels and restaurants, 54 stores and places of business, 29 stables, 5 churches, 3 school houses, and 15 manufactories on the Rhode Island side of the river. In regard to the manufactories, they find their drainage to the river. Relative to the quantity of water consumed, aside from the manufactories, there is not far from 80,000 gallons consumed on this side of the river daily." With our present system of cesspools, it is obvious that the impregnation of the soil with sewage produces a contamination of ground, air and ground water, which may become a source of grave danger to health.

Licenses for the keeping of swine have been granted to 10 applicants. There appears to be considerable difficulty to reach all persons keeping swine without a license therefor. I would recommend that some action be taken, in order that the ordinance may be complied with.

All of which is respectfully submitted.

H. W. ROSE, *Supt. of Health.*

COMPARATIVE PREVALENCE

OF TWELVE IMPORTANT ACUTE DISEASES IN THE TOWNS.

For the purpose of the comparison of any one year with others, the following seven Tables will present the varying degrees of the prevalence of twelve acute diseases of importance, as causes of death during the seven years, 1884-1890.

In these Tables the appearance of the most important of the common contagious diseases, with a few others not contagious, may be traced as they occurred in the different towns, with different degrees of prevalence from year to year.

The *mortality* from that class of diseases styled zymotic, approximately corresponds, in a majority of instances, with the relative extent of the prevalence or *number* of such diseases.

A fair estimate, therefore, of the whole number of cases of each of such diseases, occurring in each county and in the whole State during each of the years represented, may be made by reference to the number of deaths of each in the alphabetical classification of diseases, and in the percentage Tables of mortality therefrom, in the Registration Reports for those years.

TABLE I.

Comparative Prevalence of Twelve Important Acute Diseases during 1884.

TOWNS.	Bronchitis.	Cholera Infantum	Croup.	Diphtheria.	Diarrhea and Dysentery.	Fever, Typhoid.	Fever, Malarial.	Measles.	Pneumonia.	Rheumatism.	Scarlatina.	Whooping Cough.
Barrington	=	=	=	0	=	—	+	—	+	=	0	—
Bristol	=	—	—	0	—	+	—	0	—	—	—	—
Warren	=	=	—	0	=	=	=	+	+	+	0	+
Coventry	=	=	—	=	+	—	..	—	+	+	—	..
East Greenwich	=	—	—	—	—	—	—	0	=	=	=	=
West Greenwich ..	=	—	=	..	—	—	0	0	=	+	=	—
Warwick	+	=	+	—	—	—	=	*	=	=	..	—
Jamestown	=	—	0	0	—	—	0	0	—	—	0	—
Little Compton	—	—	0	..	—	=	0	*	—	—	0	=
Middletown	=	—	0	..	—	=	0	—	=	0	=	—
New Shoreham	—	—	0	—	—	+	0	*	—	—	0	0
Portsmouth	=	—	0	0	—	—	0	0	—	—	—	..
Tiverton	=	—	0	..	—	—	0	—	=	=	—	..
Newport City	=	—	—	=	..	—	=	=	+	+
Burrillville	—	—	—	=	=	*	0	0	+	=	+	0
Cranston	=	=	—	—	—	=	+	—	=	+	=	—
Cumberland	+	—	+	+	—	—	*	..	—	=	=	*
East Providence ..	=	=	—	=	—	+	=	—	+	+	=	—
Foster	—	—	—	—	..	+	=	=	0	..
Glocester	—	—	..	=	=	—	0	0	+	=	=	0
Johnston ..	=	+	—	—	—	=	+	—	=	=	+	—
Lincoln	=	=	—	=	=	—	+	..	—	—	=	=
North Providence ..	=	—	..	=	—	=	+	—	+	+	—	0
North Smithfield ..	=	=	—	..	=	=	—	0	=	+	—	0
Pattucket	=	—	+	+	=	=	+	+	—	—	+	=
Scituate	=	=	—	—	—	=	+	—	+	+	+	0
Smithfield	=	=	—	—	—	=	+	0	=	+	=	..
Woonsocket ..	=	=	—	..	=	+	+	0	=	+	+	0
Providence City	=	+	=	=	—	—	=	=	+	+	+	=
Charlestown	=	—	..	—	+	—	—	0	—	—	..	+
Exeter	=	—	—	..	—	—	0	0	—	+	—	0
Hopkinton	=	—	..	—	=	=	—	0	—	=	—	+
North Kingstown ..	=	=	—	—	=	=	—	0	—	=	=	0
South Kingstown ..	=	—	—	..	=	=	..	0	+	+	—	0
Rhinecliff	=	—	..	—	+	=	—	0	—	—	..	*
Woonsocket ..	=	..	—	..	=	—	=	0	+	=	*	+

The signs or characters used in the above Table indicate the degrees of prevalence of the diseases named, as follows: The * indicate an epidemic prevalence; the sign + a large prevalence; the sign = a moderate prevalence; the sign — a small prevalence; the dots a very small prevalence; and the 0 no prevalence, according to the returns.

TABLE II.

Comparative Prevalence of Twelve Important Acute Diseases during 1885.

TOWNS.	Bronchitis.	Cholera Infantum.	Croup.	Diphtheria.	Diarrhoea and Dysentery.	Fever, Typhoid.	Fever, Malarial.	Measles.	Pneumonia.	Rheumatism.	Scarlatina.	Whooping Cough.
Barrington.....	=	—	—	..	—	=	+	0	=	=	..	—
Bristol.....	+	—	—	+	+	=	0	—	—	=	—	=
Warren.....	=	—	..	—	=	=	=	0	+	=	—	—
Coventry.....	—	..	=	+	+	..	—	*	..	+	—	+
East Greenwich.....	=	+	—	—	+	—	—	0	=	=	..	..
West Greenwich.....	—	—	—	=	+	—	..	—	..	=	..	—
Warwick.....	=	—	=	=	=	=	=	=	=	+	..	=
Jamestown.....	=	=	—	0	0	=	=	..	0
Little Compton.....	+	+	—	0	=	=	—	+	+	=	0	0
Middletown.....	+	—	—	=	=	—	..	0	=	=	0	0
New Shoreham.....	=	..	0	—	=	=	0	0	0	=	..	..
Portsmouth.....	=	..	—	=	=	—	=	=	..	0
Tiverton.....	+	=	—	..	=	=	0	+	=	—	0	=
Newport City.....	+	—	—	=	=	—	..	0	+	=	—	0
Burrillville.....	=	—	0	—	—	—	..	*	=	—	0	*
Cranston.....	=	—	=	=	=	=	+	+	+	—	—	..
Cumberland.....	=	=	=	..	—	=	+	0	—	=	..	..
East Providence.....	=	=	+	+	—	=	—	—	0	—	—	+
Foster.....	=	—	=	..	0	—	=	=	0	=
Gloicester.....	+	0	0	0	—	=	0	—	+	=	0	*
Johnston.....	=	—	+	+	=	=	+	—	+	=	—	..
Lincoln.....	=	=	=	..	=	=	+	0	—	=	..	—
North Providence....	=	—	—	=	=	=	=	—	+	+	—	..
North Smithfield....	=	—	—	—	=	=	—	=	=	—	..	+
Pawtucket.....	+	=	—	=	—	—	+	+	=	—	×	+
Scituate.....	—	=	0	+	=	=	—	0	=	=	0	0
Smithfield.....	+	—	..	=	—	—	—	0	—	=	..	..
Woonsocket.....	=	=	=	=	=	=	+	—	=	—	—	*
Providence City.....	+	=	=	=	=	—	=	=	+	=	=	+
Charlestown.....	+	0	..	—	—	—	=	=	=	=	=	—
Exeter.....	=	—	—	—	0	0	=	—	..	..
Hopkinton.....	=	—	—	—	=	—	—	0	=	—	..	..
North Kingstown....	=	=	—	=	=	—	—	..	—	—	..	0
South Kingstown....	=	=	—	—	=	—	..	0	=	—	—	..
Richmond.....	=	—	—	—	=	—	—	0	=	=	..	..
Westerly.....	=	=	=	=	..	=	=	*	..

☞ For explanation of signs or characters, see foot-note of Table I.

TABLE III.

Comparative Prevalence of Twelve Important Acute Diseases during 1886.

TOWNS.	Bronchitis.	Cholera Infantum	Croup.	Diphtheria.	Diarrhea and Dysentery.	Fever, Typhoid.	Fever, Malarial.	Measles.	Pneumonia.	Rheumatism.	Scarlatina.	Whooping Cough.
Barrington.....	+	—	—	—	—	—	—	—	—	—	..	—
Bristol.....	—	—	—	+	—	—	—	0	—	+	0	—
Warren.....	—	—	—	—	—	—	—	—	+	—	—	—
Coventry.....	+	—	—	—	—	—	+	..	—	+	—	—
East Greenwich.....	—	—	—	—	—	—	—	0	—	—	+	—
West Greenwich.....	—	—	—	—	—	—	—	+	..	—
Warwick.....	—	—	—	—	—	—	+	+	—	—	+	+
Jamestown.....	—	—	—	..	—	—	0	..	—	—	0	0
Little Compton.....	—	—	—	..	0	0	—	—	0	0
Middletown.....	—	—	—	—	—	—	0	..	—	—	0	0
New Shoreham.....	—	—	0	0	—	0	0	0	..	..	0	0
Portsmouth.....	—	—	0	—	—	—	0	0	—	—	0	0
Tiverton.....	..	—	0	—	..	0	0	..	—	—	0	0
Newport City.....	—	—	—	—	—	—	0	..	—	—	..	—
Burrillville.....	—	—	—	—	—	—	..	0	—	—	0	*
Cranston.....	+	—	—	—	+	—	+	—	+	—	—	—
Cumberland.....	—	—	0	—	—	..	*	0	—	—	—	—
East Providence.....	+	—	—	—	..	—	*	..	—	—	—	—
Foster.....	—	—	—	—	—	—	..	0	—	—	0	0
Glocester.....	—	0	0	—	—	0	..	0	—	—	0	*
Johnston.....	+	—	—	—	+	—	+	—	+	—	—	+
Lincoln.....	—	—	..	+	—	..	+	0	—	—	—	—
North Providence....	—	—	—	—	—	—	—	..	—	—	—	—
North Smithfield....	—	—	—	—	—	—	—	..	—	—
Pawtucket.....	—	+	—	—	—	—	+	..	—	—	—	—
Scituate.....	—	—	—	..	—	—	+	*	+	—	0	*
Smithfield....	—	—	—	—	—	—	—	—	—	—	0	..
Woonsocket.....	+	+	—	—	—	—	+	—	—	—	—	..
Providence City.....	+	—	—	+	—	—	—	+	+	—	—	+
Charlestown.....	—	..	—	—	+	0	—	+	..	—
Exeter.....	+	—	—	0	*	—	+	0	..
Hopkinton.....	+	—	+	—	—	+	+	+	0	..
North Kingstown....	—	—	—	—	—	—	..	0	—	—	—	..
South Kingstown ..	—	—	+	0	—	—	+	*
Richmond.....	+	..	—	—	+	—	..	—	—	+	..	—
Westerly.....	—	—	—	..	+	—	—	0	—	+	—	+

For explanation of signs or characters, see foot-note of Table I.

TABLE IV.

Comparative Prevalence of Twelve Important Acute Diseases during 1887.

TOWNS.	Bronchitis	Cholera Infantum	Croup.	Diphtheria.	Diarrhea and Dysentery.	Fever, Typhoid.	Fever, Malarial.	Measles.	Pneumonia.	Rheumatism.	Scarlatina.	Whooping Cough.
Barrington.....	—	—	—	+	—	—	—	—	—	—	—	0
Bristol.....	—	—	—	—	—	—	—	—	+	..
Warren.....	—	—	—	+	—	..	—	—	—	+	—	0
Coventry.....	—	—	—	—	—	..	—	—	—	—	*	..
East Greenwich.....	—	—	..	—	+	—	—	—	—	..
West Greenwich.....	—	—	..	0	—	—	—	—	..
Warwick.....	+	..	—	—	—	+	+	*	—	+	*	*
Jamestown.....	—	—	—	—	—	0	—	—	—	—
Little Compton.....	—	..	—	—	0	—	—	—	0	0
Middletown.....	—	—	..	0	—	—	—	..	—
New Shoreham.....	—	—	..	0	—	—	—	..	—
Portsmouth.....	—	—	—	—	0	0	—	—	0	0
Tiverton.....	—	—	—	—	0	—	0	—	—	—	0	0
Newport City.....	—	—	—	—	0	+	—	—	—	—
Burrillville.....	—	—	—	—	—	0	—	—	0	0
Cranston.....	—	—	—	..	—	..	+	—	—	—	+	—
Cumberland.....	..	—	—	*	—	—	+	—	..
East Providence....	—	—	—	+	—	..	—	..	+	—	+	0
Foster.....	—	—	—	+	—	—	*	—	—	0
Gloicester.....	—	0	..	..	—	—	—	0	—	—	0	0
Johnston.....	+	—	—	—	+	—	+	+	+	+	+	—
Lincoln.....	—	—	—	*	..	—	+
North Providence....	—	—	—	—	—	—	—	—	+	—	+	—
North Smithfield....	+	..	—	+	—	—	—	+	..
Pawtucket.....	—	—	—	+	—	..	—	..	—	+
Scituate.....	—	—	..	—	—	+	+	—	—	+
Smithfield.....	—	—	..	—	—	..	+	—	—	—	—	0
Woonsocket.....	—	—	—	—	—	—	—	—	—	—	*	..
Providence City.....	+	—	—	+	—	—	+	*	+	—	*	—
Charlestown.....	—	0	—	*	—	..	..	..	—	—	0	..
Exeter.....	0	0	+	..	..	0	0	0	0	0
Hopkinton.....	—	..	—	—	—	—	—	+	—	..
North Kingstown....	0	—	+	—	—	0	0	0	..	0
South Kingstown....	—	—	0	..	—	—	..	*	—	—	0	0
Richmond.....	—	0	+	*	—	..	..	—	—	—	0	..
Westerly.....	+	—	—	+	+	—	—	—	—	—	—	—

For explanations of signs or characters, see foot-note of Table I.

TABLE V.

Comparative Prevalence of Twelve Important Acute Diseases during 1888.

TOWNS.	Bronchitis.	Cholera Infantum	Croup.	Diphtheria.	Diarrhoea and Dysentery.	Fever, Typhoid.	Fever, Malarial.	Measles.	Pneumonia.	Rheumatism.	Scarlatina.	Whooping Cough.
Barrington.....	==	—	..	..	==	==	—	0	+	—	0	0
Bristol.....	..	..	—	..	==	0	*	0	—	==	==	0
Warren.....	+	—	—	—	==	—	==	..	+	==	0	0
Coventry.....	—	==	==	—	==	—	—	..	—	+	*	*
East Greenwich.....	..	—	..	—	—	—	—	0	==	+	*	+
West Greenwich.....	—	—	—	..	==	0	..	..	—	==	—	..
Warwick.....	+	==	—	..	==	—	+	..	+	==	+	—
Jamestown.....	==	—	..	..	—	0	—	0	==	—	..	..
Little Compton.....	—	0	..	—	—	0	—	—	==	==	—	—
Middletown.....	==	==	—	—	—	0	—	0	==	—	—	—
New Shoreham.....	—	—	—	—	—	—	—	—	—	—	—	—
Portsmouth.....	==	==	—	—	==	0	—	0	—	—	—	—
Tiverton.....	0	0	—	0	—	0	==	==	==	==	==	—
Newport City.....	==	==	—	—	—	0	—	0	+	—	—	..
Burrillville.....	==	—	0	0	==	0	+	0	+	==	—	0
Cranston.....	+	==	—	==	==	+	==	..	—	—	==	..
Cumberland.....	==	==	..	==	==	+	—	—	—	—	—	—
East Providence.....	+	==	—	==	==	==	—	—	==	==	—	—
Foster.....	—	—	0	..	==	—	==	0	==	==	0	0
Glocester.....	==	—	0	0	==	0	==	0	+	==	0	0
Johnston.....	+	+	—	==	==	+	+	—	==	—	==	—
Lincoln.....	+	+	—	—	==	+	+	0	—	—	—	..
North Providence...	+	+	—	—	==	*	==	*	—	+	*	—
North Smithfield....	+	==	—	—	—	+	==	—	==	==	+	..
Pawtucket.....	+	+	—	==	==	==	+	..	==	==	—	—
Scituate.....	+	==	..	..	==	—	—	..	—	..	==	..
Smithfield.....	==	==	..	..	==	—	..	—	—	—	—	—
Woonsocket.....	+	+	..	—	==	+	+	—	==	==	*	..
Providence City.....	+	==	—	==	==	==	+	—	==	==	==	+
Charlestown.....	==	0	0	—	==	==	==	0	==	—	0	*
Exeter.....	+	0	0	..	==	0	—	0	==	+	0	0
Hopkinton.....	+	—	..	—	==	—	*	0	—	+	—	—
North Kingstown....	==	..	..	—	+	—	..	0	==	—	—	0
South Kingstown....	==	+	..	..	==	—	==	0	==	—	—	—
Richmond.....	+	—	—	—	==	—	==	0	==	+	—	—
Westerly.....	==	==	..	—	==	==	==	0	==	+	—	..

For explanation of signs or characters, see foot-note of Table I.

TABLE VI.

Comparative Prevalence of Twelve Important Acute Diseases during 1889.

TOWNS.	Bronchitis.	Cholera Infantum	Croup.	Diphtheria.	Diarrhœa and Dysentery.	Fever, Typhoid.	Fever, Malarial.	Measles.	Pneumonia.	Rheumatism.	Scarlatina.	Whooping Cough.
Barrington.....	—	—	—	—	—	—	—	+	+	—	0	0
Bristol.....	—	—	—	0	—	—	0	0	—	—	0	0
Warren.....	—	—	—	—	—	+	0	+	+	—	0	0
Coventry.....	—	—	—	—	+	—	—	*	—	+	—	0
East Greenwich.....	+	—	—	—	—	—	—	—	—	—	—	0
West Greenwich.....	—	—	—	—	—	—	—	—	—	+	—	—
Warwick.....	—	—	—	—	—	—	—	—	—	—	—	—
Jamestown.....	—	—	—	—	—	—	0	*	—	—	—	0
Little Compton.....	—	—	—	—	—	—	0	0	—	—	—	0
Middletown.....	—	—	—	—	—	—	0	—	—	—	—	0
New Shoreham.....	—	—	—	—	—	—	0	—	—	—	—	0
Portsmouth.....	—	—	—	—	—	—	0	0	—	—	—	0
Tiverton.....	—	—	—	—	+	—	—	—	—	—	—	0
Newport City.....	—	—	—	—	+	—	0	—	—	—	—	—
Burrillville.....	+	—	—	—	—	—	0	+	—	—	—	+
Cranston.....	—	—	—	—	—	—	—	+	+	—	—	—
Cumberland.....	—	—	—	*	—	+	*	—	+	—	—	*
East Providence..	+	—	—	—	—	—	—	—	+	—	—	+
Foster.....	—	—	—	—	—	—	0	*	—	—	0	*
Glocester.....	+	+	—	—	—	—	0	*	—	—	0	+
Johnston.....	+	—	—	—	+	—	+	+	—	—	—	0
Lincoln.....	—	—	—	—	—	—	+	—	—	—	—	—
North Providence...	+	—	—	—	—	—	—	—	—	—	—	—
North Smithfield....	—	—	—	+	—	+	—	—	—	—	+	+
Pawtucket.....	—	—	—	—	—	—	+	—	—	—	—	—
Scituate.....	+	—	—	—	—	—	—	—	+	—	0	+
Smithfield.....	+	—	—	—	+	—	—	*	—	—	0	—
Woonsocket.....	—	—	—	*	—	—	—	—	—	—	—	—
Providence City.....	+	—	—	—	—	—	—	+	+	+	*	*
Charlestown.....	—	—	—	—	—	—	0	0	—	—	*	+
Exeter.....	—	—	—	—	—	—	0	—	—	—	0	0
Hopkinton.....	+	—	—	—	*	—	—	*	—	+	—	—
North Kingstown....	—	—	—	—	—	—	—	—	—	—	0	*
South Kingstown....	+	—	—	+	—	+	—	0	—	—	0	0
Richmond.....	—	—	—	—	+	—	—	+	—	+	—	—
Westerly.....	—	—	—	0	—	—	—	0	—	—	—	0

For explanation of signs or characters, see foot-note of Table I.

TABLE VII.

Comparative Prevalence of Twelve Important Acute Diseases during 1890.

TOWNS.	Bronchitis.	Cholera Infantum	Croup.	Diphtheria.	Diarrhea and Dysentery.	Fever, Typhoid.	Fever, Malarial.	Measles.	Pneumonia.	Rheumatism.	Scarlatina.	Whooping Cough.
Barrington.....	+	..	==	0	==	:	==	==	+	==	0	0
Bristol.....	==	==	:	0	+	==	0	*	==	==	==	+
Warren.....	==	==	—	—	==	==	==	0	==	==	—	+
Coventry.....	==	==	—	==	==	0	:	+	—	==	—	—
East Greenwich.....	+	==	—	—	+	==	==	+	+	==	—	0
West Greenwich.....	—	==	—	—	==	—	0	—	—	—	0	0
Warwick.....	==	..	—	..	==	—	==	*	+	—	—	—
Jamestown.....	—	==	—	0	0	==	—	..	0
Little Compton.....	+	==	—	0	0	==	—	..	0
Middletown.....	—	—	—	—	—	—	—	—	—	—	—	—
New Shoreham.....	—	—	—	—	—	—	—	—	—	—	—	—
Portsmouth.....	+	==	—	0	0	==	—	—	0
Tiverton.....	—	—	:	==	==	0	0	==	—	—	==	—
Newport City.....	—	—	—	—	—	—	—	—	—	—	—	—
Burrillville.....	+	..	—	==	==	*	0	0	==	—	0	0
Cranston.....	+	==	—	==	+	==	==	:	+	==	+	==
Cumberland.....	==	==	—	+	==	—	+	+	==	==	—	—
East Providence.....	+	==	—	==	==	—	==	*	==	==	==	—
Foster.....	==	==	0	—	==	==	—	0	+	==	0	==
Gloicester.....	+	0	—	—	==	==	—	0	==	==	0	0
Johnston.....	+	==	—	+	==	==	—	+	+	==	—	==
Lincoln.....	==	==	—	==	+	+	+	==	==	==	—	==
North Providence...	+	==	—	—	==	—	==	0	==	==	—	0
North Smithfield...	==	—	—	—	==	==	—	—	==	==	—	:
Pawtucket.....	==	==	—	==	+	—	+	—	==	==	—	+
Scituate.....	+	—	—	—	==	—	:	:	==	==	0	+
Smithfield.....	==	:	:	==	==	:	—	0	==	==	0	:
Woonsocket.....	==	==	—	—	—	—	==	—	—	+	—	+
Providence City.....	+	==	—	==	+	==	—	—	+	==	+	+
Charlestown.....	+	==	==	0	—	0	—	==	0	0
Exeter.....	==	0	0	:	+	—	0	0	—	==	0	0
Hopkinton.....	+	..	—	—	==	==	:	*	==	—	0	*
North Kingstown....	==	—	0	..	==	—	0	+	—	==	0	*
South Kingstown....	+	==	—	—	==	+	—	+	+	+	—	*
Richmond.....	==	:	..	—	==	—	0	+	—	==	0	==
Westerly.....	==	—	0	..	+	..	—	*	==	==	0	*

For explanation of signs or characters, see foot-note of Table I.

Influenza epidemic all over the State, January and February.

METEOROLOGY.

It has been remarked in previous reports of the Board that the influence of the meteorological condition of the atmosphere, as well as the floating matter suspended therein, as causes of disease, are recognized and acknowledged by all pathologists ; and the following tables are therefore introduced, as heretofore, for the purpose of comparing the large prevalence of certain diseases at different periods of the year, with the temperature, the barometric pressure, the relative humidity, prevailing direction and force of the wind and other conditions of the atmosphere, and also the amount of cloud and rainfall during each month of the year. All of the said diseases may be found in the report upon the registration of deaths arranged by MONTHS, in Table VII of the Registration Report.

The first table is compiled from the monthly reports of the City Engineer of Providence, and shows the mean, maximum and minimum temperature of the different months, and the extreme and average daily range of the same, the rainfall and prevailing direction of the wind.

The second table will give a more comprehensive monthly summary of observations during 1890, including a larger number of atmospheric conditions for each month, and also yearly summaries for each of the nine preceding years.

It is condensed from the annual summary of monthly observations at Hope Reservoir and the City Hall.

The meteorological observations taken on Block Island are furnished by the courtesy of the officers of the Signal Office, War Department, Washington, D. C.

TABLE I.

Temperature, Rainfall and prevailing direction, of the wind, for each month during the year 1890.

MONTHS, 1890.	TEMPERATURE.							Total amount of Rain or Melted Snow in inches.	Prevailing Direction of the Wind.
	Monthly Mean.	Maximum.	Minimum.	Monthly Range.	Greatest Daily Range.	Least Daily Range.	Average Daily Range.		
January.....	35.0	63.5	12.	51.5	31.	6.	16.9	2.79	N. W.
February... ..	35.1	65.	10.5	54.5	35.	5.5	15.5	3.35	N. W.
March.....	34.8	66.	6.5	59.5	25.5	2.	14.4	8.27	N. W.
April.....	47.6	69.5	27.5	42.	29.	3.5	24.2	3.59	N. W. and Var.
May	58.2	81.5	41.	40.5	16.	3.	19.	5.47	S.
June.....	66.5	88.	50.5	37.5	30.	3.	22.2	2.68	S. and Var.
July	72.4	96.	52.	44.	31.	7.	19.	1.81	S. and Var.
August.....	69.9	90.	52.	38.	24.	7.	15.7	2.61	N. W. and Var.
September.....	63.9	81.	40.	41.	27.5	3.5	14.4	4.82	N. W. and Var.
October.	51.	74.	35.	39.	21.	4.5	11.	9.19	N. and N. W.
November.....	42.3	67.	16.	51.	24.5	3.5	14.2	0.74	W. and N. W.
December	28.2	51.5	5.5	46.	44.	7.	15.9	5.28	W. and N. W.
For the year.....	50.4	96.	5.5	45.4	.....	.....	.....	50.6	

Mean temperature for the year 1890 was 50.4° Fah. Total amount of rain and melted snow, 50.6 inches.

TABLE II.
Summary of Meteorological Observations at Hope Reservoir and City Hall, for the Year 1890.

Months.	BAROMETER. Reduced to Sea Level, and to 32°				THERMOMETERS.				Relative Humidity.	WIND.								WEATHER.				RAIN AND SNOW.					
	Mean.	Maximum.	Minimum.	Range.	Mean.	Maximum.	Minimum.	Range.		Prevailing Direction. No. of days it was								Clear.	Atmosphere. No. of days it was			Amount of Rain or Melted Snow in Inches.	Depth of Snow in Inches.				
										Mean Velocity.									All Others.	Mean Amount of Cloud.							
										N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.				Rain or Snow.						
January	30.13	30.88	29.37	1.51	35.	63.5	12.	51.5	74	5	0	0	1	1	5	1	10	8	10	5	12	1	13	0	5.9	2.79†	3.50
February.....	30.05	30.67	29.35	1.32	35.1	65.	10.5	54.5	73	5	1	2	2	2	1	4	6	5	10	3	9	1	14	1	5.9	3.35†	3.50
March	29.95	30.53	29.36	1.17	34.8	66.	6.5	59.5	74	6	1	0	0	5	1	5	8	5	10	3	8	1	19	0	6.0	8.27†	22.50
April.....	30.05	30.51	29.38	1.13	47.6	69.5	27.5	42.	63	4	1	1	2	2	1	5	5	9	9	4	15	0	11	0	4.5	3.59†	2.50
May.....	29.96	30.30	29.56	.74	58.2	81.5	41.	40.5	79	4	2	0	3	15	2	0	1	4	9	1	12	1	17	0	5.8	5.47	.....
June.....	29.96	30.28	29.67	.61	66.5	88.	50.5	37.5	73	4	2	1	0	6	2	4	5	6	8	0	15	1	14	0	5.5	2.68	.....
July	30.01	30.24	29.61	.63	72.4	96.	52.	44.	71	3	1	0	2	6	4	4	7	7	7	2	14	1	14	0	5.0	1.81	.....
August.....	29.99	30.24	29.48	.76	69.9	90.	52.	38.	76	2	1	1	2	1	4	2	6	12	7	0	16	0	15	0	5.4	2.61	.....
September.....	30.10	30.37	29.68	.69	63.9	81.	40	41.	83	4	2	0	0	5	2	2	6	9	6	5	11	0	14	0	5.5	4.82	.....
October.....	29.84	30.38	29.26	1.12	51.	74.	35.	39.	79	7	2	1	1	0	2	3	9	6	8	1	13	0	17	0	6.2	9.19	.....
November.....	29.99	30.34	29.23	1.11	42.3	67.	16	51.	72	3	0	0	4	4	7	9	3	8	6	15	0	8	1	4.4	0.74	.....
December.....	29.98	30.58	29.32	1.26	28.2	51.5	5.5	46	66	5	2	0	0	4	6	10	4	10	7	11	1	12	0	4.9	5.28†	10.00	
Means for the year.	30.00	.....	.....	1.00	50.4	.....	.....	45.4	74	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	.....	.....	.....	.....	.....	5.4	.....	.....
Totals for the year.	.....	.....	.....	.....	.....	.....	.....	.....	.....	52	15	6	13	47	32	43	79	78	.....	37	151	7	168	2	.....	50.60	42.00
Extremes.....	.....	30.88	29.23	1.65	.....	96.	5.5	90.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

† Snow and rain.

TABLE II.—CONTINUED. *Summary of Meteorological Observations, at Hope Reservoir and City Hall.*

MONTHS.	BAROMETER. Reduced to Sea Level, and to 32°				THERMOMETERS.				Relative Humidity.	WIND.					WEATHER.				RAIN AND SNOW.		
	Mean.	Minimum.	Maximum.	Range.	Mean.	Minimum.	Maximum.	Range.		Prevaling Direction, No. of Days it was					Clear.	Variable.	Rain or Snow.	Atmosphere. No of days it was	Mean Amount of Cloud.	Amount of Rain or Melted Snow in inches.	Depth of Snow in inches.
										Mean Velocity.											
										N. E.	E. S. E.	S. S. W.	N. W.	Variable.							

Means for the year.	30.01	.....	.....	1.13	48.8	.....	.....	46.8	74	.....	.....	.....	.....	8	.....	.....	.....	.....	.....	.....	5.0	.....	.....		
Totals for the year.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	51	27	12	7	56	30	39	69	74	34	143	18	160	10	.....	52.02	54.50
Extremes	.....	30.80	28.69	2.11	.....	95.5	-5.5	101.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Yearly Summary for 1886.

Means for the year.	29.98	.....	.....	1.09	48.7	.....	.....	46.6	71	.....	.....	.....	.....	9	.....	.....	.....	.....	.....	.....	4.6	.....	.....		
Totals for the year.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46	21	8	14	56	43	42	74	61	45	157	17	142	4	.....	39.70	27.25
Extremes	.....	30.82	28.99	1.83	.....	93.5	-1.	94.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Yearly Summary for 1885.

Means for the year.	30.01	.....	.....	1.05	49.5	.....	.....	49.2	76	.....	.....	.....	.....	9	.....	.....	.....	.....	.....	.....	5.3	.....	.....		
Totals for the year.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	57	22	8	14	42	60	27	63	73	36	127	26	166	11	.....	48.76	44.50
Extremes	.....	30.97	28.93	1.86	.....	94.	-10.	104.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Yearly Summary for 1884.

TABLE II —CONTINUED. *Summary of Meteorological Observations at Hope Reservoir and City Hall.*

MONTHS.	BAROMETER. Reduced to Sea Level, and to 33°				THERMOMETERS.				Relative Humidity.	WIND.				WEATHER.				RAIN AND SNOW.						
	Mean.	Maximum.	Minimum.	Range.	Mean.	Maximum.	Minimum.	Range.		Mean Velocity.				Clear.	Fair.	Variable.	Rain or Snow.	All others.	Mean Amount of Cloud.	Amount of Rain or Melted Snow in Inches.	Depth of Snow in Inches.			
										Prevailing Direction. No. of days it was														
										N.	N. E.	S. E.	S. W.									W.	N. W.	Variable.
<i>Yearly Summary for 1883.</i>																								
Means for the year.	30.05	.....	.....	1.08	48.2	.....	.....	45.5	72	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals for the year.	.....	.....	.....	.....	.....	.....	.....	.....	.....	43 31	7 11	44 51	35 70	73	.....	45 136	17 156	11	.....	45.71	73.00
Extremes	.....	30.77	28.88	1.89	.....	93.	-9.5	102.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>Yearly Summary for 1882.</i>																								
Means for the year.	30.03	.....	.....	1.03	49.2	.....	.....	46.	72	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals for the year.	.....	.....	.....	.....	.....	.....	.....	.....	.....	54 26	2 16	46 39	40 82	60	.....	44 148	31 136	6	.....	51.84	74.00
Extremes	.....	30.79	29.22	1.57	.....	95.	-11.	106.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>Yearly Summary for 1881.</i>																								
Means for the year.	30.00	.....	.....	1.08	49.6	.....	.....	44.5	73	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals for the year.	.....	.....	.....	.....	.....	.....	.....	.....	.....	47 33	12 9	50 47	20 80	67	.....	80 73	54 130	28	.....	52.96	27.50
Extremes	.....	30.80	28.97	1 83	.....	96.	-4.	100.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

The mean velocity and mean force of the wind and amount of cloud are expressed approximately in figures from 0 to 10. Multiplying the mean force by four will give approximately the mean velocity, per hour, in miles.

Condensed Table of Meteorological Observations in Rhode Island, 1881-1890.

YEARS.	BAROMETRIC PRESSURE.				THERMOMETERS.				HUMIDITY.	PRECIPITATION.		WIND.
	Mean Barometer.	Highest Barometer.	Lowest Barometer.	Range of Barometric Pressure.	Means.	Maximum.	Minimum.	Range.		Rain and Melted Snow in inches.	Number of Days Snow or Rain fell.	
1890	30.00	30.88	29.23	1.00	50.4	96.	5.5	45.4	74	50.60	168	N. W.
1889	29.99	30.90	28.93	1.15	51.4	92.5	0.5	42.3	76	55.91	166	N. W.
1888	30.00	30.82	28.75	1.21	48.2	96.5	-5.	46.5	72	63.44	167	N. W.
1887	30.01	30.97	28.94	1.26	49.4	94.	-1.5	47.	73	50.98	154	N. W.
1886	30.01	30.80	28.69	1.13	48.8	95.5	-5.5	46.8	74	52.02	160	Variable.
1885	29.98	30.82	28.99	1.09	48.7	93.5	-1.	46.6	71	39.70	142	N. W.
1884	30.01	30.79	28.93	1.05	49.5	94.	-10.	49.2	76	48.76	166	Variable.
1883	30.05	30.77	28.88	1.08	48.2	93.	-9.5	45.5	72	39.54	156	Variable.
1882	30.03	30.77	29.22	1.03	49.2	95.	-11.	46.	72	44.96	136	N. W.
1881	30.00	30.80	28.97	1.08	49.6	96.	-4.	44.5	73	44.79	130	N. W.

TABLE III.
BLOCK ISLAND, R. I.

Statement showing the air pressure, reduced to sea level; the temperature, precipitation and the prevailing direction of the wind for each month of the year 1890.

1890. MONTHS.	PRESSURE.			TEMPERATURE.							Precipitation in inches.	Prevailing Wind direction.
	Mean.	Highest.	Lowest.	Mean.	Maximum.	Minimum.	Absolute Range.	Mean Daily Range.	Greatest Daily Range.	Least Daily Range.		
January	30.20	30.86	29.43	37.0	57	14	43	12.9	30	3	2.33	N. W.
February	30.12	30.65	29.49	37.2	58	14	44	12.1	23	3	1.50	N. W.
March	30.02	30.58	29.42	35.4	53	11	42	10.4	20	5	5.16	N. W.
April	30.10	30.57	29.54	44.6	63	28	35	10.7	17	4	3.37	S. W.
May	30.00	30.32	29.65	52.2	66	42	24	8.8	14	4	3.83	S. W.
June	30.00	30.30	29.74	61.6	80	50	30	11.6	23	4	1.35	S. W.
July	30.05	30.28	29.72	67.6	85	54	31	11.1	19	5	1.39	S. W.
August	30.03	30.28	29.62	67.9	79	53	26	9.4	14	5	2.09	S. W.
September . . .	30.15	30.39	29.73	63.7	74	48	26	9.0	15	4	2.69	S. W.
October	29.89	30.39	29.30	53.4	70	41	29	7.8	12	4	4.57	N. W.
November . . .	30.05	30.39	29.51	44.0	60	19	41	10.5	17	5	0.66	S. W.
December . . .	30.04	30.59	29.45	31.4	54	10	44	14.1	39	7	2.57	N. W.
Annual	30.05	30.86	29.30	49.7	85	10	35	10.7	..	..	31.51	S. W.

Signal Office, War Department,
Washington, D. C., Feb. 24, 1891.

A. W. GREELY,
Chief Signal Officer.

VITAL STATISTICS.

It is needless to allude in detail to the various purposes to which reliable reports of the movements of the population of cities, districts, states and nations, in relation to births, marriages, and deaths are applicable, and for which they are in many instances not only helpful but absolutely indispensable.

It has previously been remarked by the Secretary that no statistics are of more value in any age, or to any nation or government of whatever size or power, than those which relate to the bodily capacity of its citizens for labor and endurance, and the corresponding equal and associated mental capacity for enterprise and good judgment. The foundation of municipal, state, or national prosperity, is strength of body and strength of mind. These in turn are dependent on *good health*. "PUBLIC HEALTH IS PUBLIC WEALTH," said Benjamin Franklin.

Correct reports upon the registration of births, marriages and deaths in any community, are the disclosures of the advancement or decadence of the average health and bodily vigor of that people. It is the taking an account of stock, the ascertainment of the gain or loss in the most important investment, the status of the most important factor of public enterprise and prosperity.

But vital statistics have come in modern times to subserve much more extended and equally important uses. When collected, classified, arranged and collated in tables, they become the basis of much scientific study. In addition to their original application relative to civil and national life, in affording evidence of legal consanguinity, the prevailing public spirit and the moral tone of the social relations and disposition for associated interest, as shown by the marriage statistics and legitimate birth-rates, they have also other very important industrial, corporate and sanitary relations.

They furnish the data for determining the expectations of life at different ages, and are therefore the basis of life insurance, beneficial and annuity associations.

They furnish to medical science information of the highest value in regard to the relations of disease to locality, climate, sex, season, race, and the variations of the public health from year to year under different topographical and meteorological conditions.

Dr. William Farr, the eminent English philosopher and the highest authority on vital statistics, observes: "Deaths and causes of death are scientific facts which admit of numerical analysis. Science has nothing more inviting to offer than a study of the influence of civilization, occupation, locality, seasons and other physical agencies, either in generating disease or producing death, or in improving the public health."

REGISTRATION REPORTS.

The thirty-seventh report upon the registration of births, marriages and deaths in R. I. for 1889, was prepared during the year and will be found appended to this report. It required the use of more than 1,500,000 figures in the preparation after the data were all in hand. There were some additional tables, and the text, explanatory remarks and observations, etc., were extended beyond those of previous years.

An examination of the report will show that the various facts connected with the different events of birth, marriage and death are presented in a great variety of combinations and comparisons for the year 1889, and for different periods of previous years, and especially are such comparisons made in regard to deaths, including seasons, circumstances, sexes, social conditions, parentage, ages, occupations, causes, etc., and there are presented also the various relations, the different facts bear to each other in the same class of events and to various facts in each of the other classes of events.

The thirty-eighth report upon the registration and return of births, marriages and deaths in Rhode Island in 1890 is now in preparation. The labors of collection, examination, arrangement, verification and ultimate correction of the returns, including much correspondence and frequent personal visitation, is, in but little measure appreciated by the average citizen. Added to this is the formidable work alluded to in the preceding paragraph. The patient plodding, the careful attention to details, the precise examination of numbers and exact mathematical processes, necessary to avoid erroneous results and fallacious conclusions, follow one as with flaming swords throughout the whole of the preparation of the report.

Below will be found some of the general results of vital registration recorded during 1890.

BIRTHS.

SEX.		PARENTAGE.	
Males	4,351	Native*.....	4,021
Females.....	4,199	Foreign.....	3,044
Whole number of births.....		8,550.	

MARRIAGES.

Native born Groom and Bride.....	1,555
Foreign born Groom and Bride.....	951
Native Groom and Foreign Bride.....	845
Foreign Groom and Native Bride.....	344
Whole number of marriages.....	3,195.

Native Grooms..... 1,900 | Foreign Grooms..... 1,295

DEATHS.

SEX.		PARENTAGE.	
Males	3,501	Native	3,010
Females.....	3,433	Foreign†.....	3,924
Whole number of deaths		6,934.	

There was one birth to every 40.4 of the population, or.....24.7 births in every 1,000.
 One person married in every 54.1 of the population, or18.5 persons married in every 1,000.
 And one death in every 50.0 of the population, or.....20.1 deaths in every 1,000.

The following summary will show the rates, per 1,000 of the population, of births, marriages and deaths, for ten years :

	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.
Birth-rates.....	24.4	24.7	24.4	23.9	23.1	24.5	24.2	24.2	24.1	24.7
Death-rates.....	18.1	18.3	18.1	17.1	17.7	18.8	19.9	20.4	19.0	20.1
Excess of Birth-rates over Death-rates..	6.3	6.4	6.3	6.8	5.4	5.7	4.2	3.8	5.1	4.6
Marriage-rates..	19.8	19.1	18.5	17.2	16.3	17.7	18.0	18.7	18.4	18.5

A comparative exhibit of the relative proportions of the births, marriages and deaths in the different counties and larger towns, during the last six years, may be found in the following summary :

* Including all whose parents were born in the United States, whether of foreign parentage or of native.

† Including the children of the foreign born.

	Births per 1,000 of population.						Marriages. Persons married per 1,000 of population.						Deaths per 1,000 of population.					
	1890	1889	1888	1887	1886	1885	1890	1889	1888	1887	1886	1885	1890	1889	1888	1887	1886	1885
Bristol Co...	19.8	19.6	18.1	19.6	20.9	18.4	19.1	12.7	12.5	12.8	13.6	12.2	22.1	17.6	21.3	18.2	19.2	16.3
Kent Co....	23.8	26.6	24.6	23.0	22.8	20.9	17.2	19.7	16.7	16.8	16.9	15.5	17.6	20.1	18.4	15.5	17.5	16.4
Newport Co.	16.8	19.4	24.4	20.0	18.9	18.1	11.4	12.6	12.2	11.8	11.6	9.9	13.7	14.7	18.0	14.6	14.7	16.5
Newp't City	34.2	33.5	28.1	30.9	29.3	27.0	18.5	12.7	11.7	12.0	13.1	15.0	17.9	15.2	15.0	15.3	15.1	13.6
Prov. Co.*..	30.2	25.5	25.4	25.0	27.2	22.9	18.8	20.3	18.0	15.4	15.9	15.6	22.9	19.9	20.0	19.3	18.8	18.1
City of Paw-tucket....	25.2	25.7	25.4	25.0	22.5	23.1	19.0	21.8	23.5	24.6	20.0	22.3	21.9	20.5	21.8	23.3	19.0	19.0
City of Prov.	25.9	24.9	24.4	24.3	24.7	24.8	21.3	21.4	21.6	21.0	20.8	18.5	21.7	19.7	21.0	21.6	19.6	18.3
Washington Co.....	16.1	18.3	16.1	20.4	20.3	18.8	17.1	14.9	18.7	16.6	15.9	15.1	13.5	14.6	16.0	15.5	15.0	14.1
Entire State.	24.7	24.1	24.3	24.2	24.5	23.1	18.5	18.4	18.7	18.0	17.7	16.3	20.1	19.0	20.4	19.9	18.8	17.7

The following will present the number, parentage and proportions of deaths from several diseases during 1890, which are recognized as having more or less prominence, from year to year.

	Whole No. of Deaths.	Parentage. Native. Foreign.		Per centum of whole No.
Cholera Infantum.....	582	202	380	8.39
Diarrhœa.....	95	34	61	1.37
Diphtheria.....	211	93	118	3.04
Dysentery.....	87	40	47	1.25
Fever, Malarial.....	42	10	32	.60
Fever, Typhoid.....	107	39	68	1.54
Influenza (La Grippe).....	168	68	100	2.42
Measles.....	92	42	50	1.33
Whooping Cough.....	70	25	45	1.00
Scarlatina.....	16	6	10	.23
Pneumonia.....	569	247	322	8.20
Consumption.....	852	281	571	12.29
Apoplexy.....	242	139	103	3.49
Paralysis.....	99	60	29	1.42
Heart Disease.....	378	204	174	5.45
Bronchitis.....	275	116	159	4.00
Kidney Diseases.....	153	73	80	2.60

	1890.	1889.
Average age in years of Male decedents.....	31.04	32.20
Female "	34.26	35.75
Total "	32.62	34.00
Percentage of Zymotic diseases to whole number of causes of death.	25.38	22.08
Constitutional diseases.....	18.48	18.61
Local "	40.15	42.10
Developmental "	10.89	12.04
Violence, etc.....	5.10	5.17

The mortality from the diarrhoeal diseases of children was unusually large during 1890, which will account for the large percentage of deaths from zymotic diseases, and the lessened average age of the total decedents.

CATTLE COMMISSION.

In this department of the work of the Board, the time and attention of the Secretary is almost constantly employed. There seems to be an understanding prevalent in some sections of the State, that he is expected to give advice in regard to many diseases of animals, whether such diseases are contagious or infectious, or not. It is the intent of the Secretary to treat all persons with courtesy, and time is given to many lengthy hearings of but little profit to the State or any one except the parties concerned. Such conferences are not of sufficient value to merit recording, but are great wasters of time. The desire to obtain gratuitous advice is the motive of the larger number of applicants. Glanders and farcy in horses and tuberculosis in bovine animals are the diseases which take the most of his time, and to which, as the most important of the diseases among the domestic animals of the State, he is always ready to hear from and attend to.

Other diseases of animals have, however, occurred during the year, which received the attention of the Secretary, as anthrax or splenic fever, kine pox, swine plague, pink-eye, etc.

Some part of one hundred and fifty-two days during the year were occupied in the duties of the Cattle Commission.

GLANDERS AND FARCY.

Fourteen hundred and eight horses were inspected in the different towns and cities in the State during 1890, including those at the agricultural fairs. Of this number one hundred and forty-two were found glandered or farcied and destroyed. Forty-one horses had been quarantined for from two weeks to six, on suspicion, nearly all of which, within that time, developed glanders or farcy in a definite form and were killed.

Every county in the State contributed more or less of the cases of glanders, but much the larger number were found in Providence, Pawtucket and vicinity.

TUBERCULOSIS.

The subject of tuberculosis in its various relations, continues to be the most important and most absorbing topic of discussion in veterinary circles, and indeed, because of its universal distribution, its impartial destructiveness of human and animal existence, and mutual communicability in a greater or less degree, it could scarcely be otherwise than of great interest to all classes of people.

KOCH'S LYMPH AS A MEANS OF DIAGNOSIS.

The announcement, late in the year, that the existence of tuberculosis in mankind or animals could be determined by the physical reactions following the introduction into the fluids of the body of Koch's lymph (or tuberculin, so called) by injection, occasioned a profound sensation throughout the civilized world. The possibility of the attainment of a desideratum so ardently hoped for was hailed throughout the professional world with mingled feelings of expectation and doubt.

The experiments and tests made upon mankind, up to the present writing, seem to indicate that it is a method of diagnosis of considerable value, but not absolutely reliable, and owing to the indispensable requirements of perfect lymph, best surroundings of the patient, great care, deliberation and skill on the part of the operator and diagnostician, and sufficient time and attention given to results, the method, so far as is now known, can hardly be expected to become of common use in the practice of the average physician.

A considerable number of experiments upon cattle have been made in Europe, but the number and details so far as now made public are meagre, but the few reported results have been similar to those produced upon human kind.

The clinical staff of the veterinary hospital connected with the veterinary annex of the University of Pennsylvania have organized a commission to examine by careful and scientific investigation into the value of Koch lymph in veterinary medicine. The commission intend to prosecute the study of this important question with the view of determining its value in three special directions. First : To determine whether or not it is of any value to the veterinarian in diagnosing tuberculosis in cattle. Second : To discover, if possible, what may be its value as a curative agent. Third : To prove by a series of carefully made experiments, if it be possible to give healthy

animals immunity to the contagion of tuberculosis, and for what length of time.

Milch cattle, supposed to be suffering from tuberculosis, have been procured, and are being subjected to a most rigid examination to determine the presence of the disease. The temperature of these animals will be taken every two hours for at least twenty-four hours prior to the primary injection. The members of the commission will make a careful physical examination of the animals, and will individually record the facts as they are clinically presented; these records will be compared in making up the diagnosis.

A bacteriological examination will also be made to determine the presence in the milk and bronchial mucous of the bacillus tuberculosis; gelatine cultures will also be made from the milk and bronchial mucous, which should positively identify the bacilli if they be present.

In this way the Commission expect to satisfy themselves that a given animal positively has tuberculosis. The lymph will be injected in comparatively large doses and the temperature and physical signs observed every hour during the following days and nights; it is expected that high febrile reactions will occur, similar to those noticed in the human family.

Autopsies will be made on these animals and careful macroscopical and microscopical examinations of all the organs of the body will be made in order to learn the effect of the treatment; culture experiments will also be made of these tissues with the view to determine what has been the effect of the lymph upon the vitality of the bacilli contained in them. Other animals in the earlier stages of the disease will be procured if possible and an effort made to cure them. If they cannot be obtained in a stage sufficiently early to be suitable for this purpose, the disease will be produced by inoculating healthy animals with pure cultures of the bacillus tuberculosis, and the curative action of the lymph given a full and complete opportunity to prove its value.

Control experiments will be carried on at the same time. A very important line of work laid out by the Commission is that which is to determine the immunity of treated animals to the disease of tuberculosis. It is to be hoped that this can be established, as it will confer upon mankind the greatest of blessings. Should it be possible to establish immunity in cattle, if only for one year, it will be of inestimable value to the human race.

The hospital authorities have set apart separate and isolated wards

for the special use of the Commission in their investigations, and the tuberculosis commission of the University Medical Hospital will furnish the lymph necessary to carry on the work of the Veterinary Commission.

From communications in the hands of the Commission from special correspondents at the Royal Veterinary School at Berlin, it is learned that up to the time of writing no *official* or *extended* investigation as to the value of Koch's lymph in the tuberculosis of animals had been undertaken in Germany.

This investigation undertaken by the Commission of the Veterinary Department of the University of Pennsylvania to determine the influence of Koch's lymph in animals, is the first undertaken in this country. The Commission believe that this remedy of Koch's will prove to be of great value to the veterinarian and agriculturist by enabling them to detect the disease in its earliest stages, when it is so obscure as to evade the most careful physical examination. Should this prove to be true it will enable the stock owner to weed out the diseased stock from his herd, even before they can do harm to his healthy cattle or to the consumers of the products of his dairy.

SOME OBSERVED FACTS.

In connection with the consideration of tuberculosis in cattle, there are some facts that have come within the experience and observation of the Secretary that have an obvious bearing upon the question of the transmissibility of tuberculosis from one animal to another, and from cows to human beings by the ingestion of milk.

Within the last twelve years there have been found from one to two cases of tuberculosis in various herds in the State, without the occurrence of other cases subsequently in the same herd.

Within the same period there have also occurred in a very few instances only, the knowledge of the infection of the entire herd, and in no herd exceeding eight in number, except at the State Farm.

In no instance has a case of tuberculosis occurred in any family, ascertained by observation or inquiry, subsequently to the home use of the milk from any of the herds in which tuberculosis had been found.

In no instance has tuberculosis been found present in any family or in existence immediately preceding the occurrence of the malady in the bovine stock of such family.

In no instance has there seemed to be any connection between the

infection of tuberculous cattle and the sputum of any consumptive person.

The Secretary has under observation several persons who used exclusively, for not less than a year in either case, the milk of tuberculous cows which were badly diseased, and so far, now from two to three years, no case of consumption has occurred among them.

These facts however do not disprove the theory of the communicability of tuberculosis, which the Secretary believes to be well established, but do show that the dangers from infection are not so inevitable as some theorists are disposed to affirm.

It may be stated also that while tuberculosis has been gradually increasing among the milch cows of the State, the proportion of deaths from consumption or tuberculosis, among the human population of the State, has been gradually decreasing.

PREVALENCE OF TUBERCULOSIS AMONG CATTLE.

In the "Report upon Tuberculosis and its Prevalence among the Neat Cattle of R. I." made to the General Assembly at the January Session of 1889, embodying the results of investigations made during 1888 by the Secretary, in compliance with the request by resolution of the General Assembly at the January Session of 1888, there may be found on page 31 the following statement in regard to the estimated prevalence of tuberculosis in the State.

"From the information derived from the sources stated above, and from personal visitation and examination of herds in various sections of the State, and from the results of autopsies requested and permitted, and of autopsies to which personal attention was called by owners of cattle, and from the known results of introducing into a healthy herd an animal having tuberculosis, the writer has been reluctantly compelled to estimate the proportion of milch cows in the State, above five years of age, which at this time are affected with tuberculosis in some degree, as one to twenty, or five in every one hundred."

The estimate was considered by a considerable number of veterinarians, outside of the State as well as within, as being below the actual amount, and the Secretary was subjected in the public press to adverse criticism in that respect, while complimented as to the general accuracy and value of the report.

By some veterinarians, the proportion in southern New England, New York and New Jersey was placed as high as from fifteen to

twenty in every hundred of the bovine stock. The Secretary has, however, seen no reason to revise his estimate. It should be understood that, as a rule, there is no tuberculosis whatever in very much the greater part of the farm herds of Rhode Island.

Pertinent to that point, he has the statement of Dr. Alexander Burr, Inspector of Meat at the Brighton Abattoir in Mass. No one questions Dr. Burr's ability or accuracy.

In his report for 1890, Table V., may be found the following statements:

Percentage of Tuberculosis among Cattle inspected.

CLASS OF ANIMAL.	NUMBER.	TUBERCULOUS.	PER CENT.
(1) Whole number of all kinds of cattle..	28,296	54	0.19
(2) Cows from Eastern States.....	1,153	52	4.5
(3) Oxen.....		1	
(4) Western Cow.....		1	
(5) Old cows sent to dead-house, which have died in the city and its neighborhood.....	116	12	10.3

It will be seen by Dr. Burr's statement, that of cattle of all kinds, less than one-fifth of one per cent. were found tuberculous, but of cows from the Eastern States, four and one-half per cent. were tuberculous. A large proportion of the animals sent to the Brighton Slaughter House from the Eastern States are of cases that begin to slacken in the production of milk and are fed high for a while and sent to the abattoir as the best disposition to be made of them.

These cows are largely those that have had the milk production stimulated to the highest degree, have been kept in close quarters and subjected to all those influences calculated to develop tuberculosis by contact with others and with deterioration of the vital powers, and so present the tubercular lesion certainly to a larger proportion than in the average herds of the State.

Of the old cows sent to the dead house, which were absolutely the worn out animals of the third and fourth rate producers of milk, cows bought for but little more than the cost of removal and kept in

the filthiest of quarters, of this class but little more than ten per cent. were found with tuberculosis.

Dr. Burr states further as follows :

“I may add in connection with the foregoing, that in connection with the abattoir, we have an establishment where fertilizers are manufactured and dead animals of all kinds received, such as horses and cattle, many of which are cows ; these animals represent a fair average of the cows of our neighborhood ; having died, the owners have seldom any disposition to hide them. I have examined all the cattle brought here and so far, my record is as follows :

Received dead cows at Abattoir from Oct. 1, '89 till April 1, '90...	80
Number found with Tuberculous lesions.....	6
Percentage	7.5

No better opportunity, it seems to me, could be found, to reach a fair average of the extent to which the disease prevails among our animals.

THE VETERINARY PROFESSION.

It is a matter of congratulation that the veterinary profession as a body has in a very large measure kept pace with the onward march of other departments of activity in scientific research, and the acquirement of expertness in the application of knowledge to practical use.

When comparison is made with the profession as it now exists, with the status of the veterinary knowledge of the average practitioner of no more than thirty-five or forty years ago, including only the fundamental branches of anatomy, physiology, pathology, materia-medica and therapeutics, and the advanced acquirements of to-day stand out with remarkable distinctiveness.

The extent and importance of the science and the art of veterinary practice has within a score of years more definitely demanded recognition on the part of the intelligent and thoughtful public, and the great strides made strictly in that professional department, has brought it prominently face to face with public acknowledgment.

With the stimulus of attainments already achieved, and the literary and professional rank honorably accorded to all who give time and attention to the scientific aspects of the veterinary art, an impulse has been given which will doubtless carry the profession onward in continued progression and to greatly larger acquirements.

It has been remarked by the *American Veterinary Review*, that "it was by the profession itself that the necessity for the organization of schools of more thorough equipment and enlarged capacity than had hitherto existed, was first felt and comprehended, although only the more thoughtful and experienced could realize what a labor of love and expenditure of hope and patience it would cost to raise them to the standing they hold to-day. And now that the most ample means and appliances for imparting an improved education have gradually accumulated and enforced their own adoption upon both those who teach and those who seek to be taught, we may honestly boast of institutions which may be advantageously compared with any of their kind on this continent, if not even with those of old Europe.

Veterinary graduates becoming thus by degrees possessed of a higher education, and the superiority of their qualifications being discovered and felt, their services become of greater value, and the masses begin to appreciate them better. Specialists in veterinary medicine exist, it is true, but their pretensions and the extent of the ground covered by their specialties are without significance or importance. No man can possess an exclusive or patent-righted knowledge in any distinct or peculiar branch of the practice of medicine. A competent practitioner must possess a familiar knowledge of the science as an entirety, even to become exceptionally expert in one or more of its branches. Graduates of veterinary medicine do not restrict their studies by any limitations of subjects ; but realizing that their profession is a progressive one, and knowing that to keep abreast with the times they must take advantage of every help which offers itself capable of facilitating their work, they have organized associations, and there is to-day no State of any importance that has not one, and, in a few instances, more veterinary societies, with their instructive and entertaining monthly, semi-annual and annual gatherings for the discussion of papers upon scientific topics. Further to exchange their ideas and to develop their opportunities for the acquirement of information, veterinary journals were created, and comparatively speaking, these have proved successful and useful.

FOOD AND DRUG ADULTERATION.

The subject of the adulteration of food and drugs has not infrequently been a theme of discussion at the meetings of the Board. The enormous extent to which sophistication has been carried, and the amount in steady preparation and gradually increasing, for disposal in the markets of such States as have no efficient laws for the restriction of such sale, none can realize, except those engaged in the business, and others in part by the reports of national and State officials, specially deputized to give the subject exhaustive and impartial investigation.

The Agricultural Department of the General Government has made provision during the last two years for extended inquiries into the extent and character of such food adulterations. From reports made to that department of careful investigations by competent scientists, the conclusions are that the total value of food consumed in the United States, including luxuries and all imported articles, and all transported from place of growth, is not less than \$5,000,000,000 or about \$75 per annum for each person, and that 5 per cent. of the same is adulterated.

In the report of one special agent the following statement is found:

“There is undoubtedly a large part of the food products that never leaves the hand of the producer, and, of course, this is not adulterated; and again, the wheat and corn production is rarely found adulterated in this country, besides which there are, of course, many articles manipulated and sold by honest men who would disdain to sell their goods if debased or misbranded. Yet, in spite of all this, undoubtedly the percentage of adulteration, sophistication, and misbranding, largely exceeds, in my opinion, 5 per cent. of the whole, and I am confident that 15 per cent. would be much nearer the mark. Such an estimate would give the startling figures of loss to the people of this country alone of \$675,000,000 a year.

“Congressional investigation on the hog product of lard clearly shows that my estimate is rather below than above the mark.”

Suppose the amount of the proportion of adulterants, (which are reckoned as of no value as nutrients, which is not quite correct,) be

placed at one-third of the above estimate, say \$225,000,000, the amount of loss to each person would be nearly \$3.50 annually. If an allowance of \$1.50, as the value of the adulterants as nutrients for each person (which is very much too large) \$2.00 would be left as the actual loss annually for each individual, or \$130,000,000 for the country at large. For the State of Rhode Island, with 350,000 and over of population, the amount of loss would be over \$700,000 annually.

Aware of the large frauds perpetrated on the citizens of the State in immediate money value,—to say nothing of the injury to health and ultimate loss to individuals and the State, thereby,—the great necessity was apparent of statute law more complete in its provisions than those heretofore enacted, for the protection of the people from the great pecuniary losses continuously sustained by reason of the adulteration of the materials required to sustain life, and falling most heavily on those least able to bear such loss.

With the conviction of such necessity, the Secretary prepared and caused to be introduced in the Senate early in the January Session of 1890, the following bill:

AN ACT TO PREVENT THE MANUFACTURE AND SALE OF ADULTERATED DRUGS,
AND MATERIALS USED FOR FOOD AND DRINK.

It is enacted by the General Assembly as follows :

SECTION 1. No person shall within this State manufacture for sale, offer for sale or sell any drug or article of food which is adulterated within the meaning of this act.

SEC. 2. The term "drug" as shall be understood by this act shall include all medicines for internal or external use, antiseptics, disinfectants and cosmetics. The term "food" shall include all articles or materials used for food or drink or in the preparation of food or drink, or condiments and confectionery.

SEC. 3. An article shall be deemed to be adulterated within the meaning of this act as follows :

(a) In the case of drugs: (1) If, when sold under or by a name recognized in the United States Pharmacopœia, it differs from the standard of strength, quality or purity laid down therein, unless the order calls for an article inferior to such standard, or unless such difference is made known or so appears to the purchaser at the time of such sale ; (2) If, when sold under or by a name not recognized in the United States Pharmacopœia, but which is found in some other pharmacopœia, or other standard work on *materia medica*, it differs materially from the standard of strength, quality or purity laid down in such work ; (3) If its strength of purity falls below the professed standard under which it is sold.

(b) In the case of food : (1) If any substance or substances have been mixed with it so as to reduce or lower or injuriously affect its quality or strength ; (2)

If any inferior or cheaper substance or substances have been substituted wholly or in part for it; (3) If any valuable constituent has been wholly or in part abstracted from it; (4) If it is an imitation of, or is sold or exposed for sale under the name of, another article; (5) If it consists wholly or in part of a diseased or decomposed, putrid or rotten animal or vegetable substance, whether manufactured or not, or, in the case of milk, if it is the produce of a diseased animal; (6) If it is colored, coated, polished or powdered, whereby damage is concealed, or if it is made to appear better or of greater value than it really is; (7) If it contains any added poisonous ingredient, or any ingredient which may render it injurious to the health of a person consuming it.

SEC. 4. The provisions of this act shall not apply to mixtures or compounds recognized as ordinary articles of food or drinks, provided that the same are not injurious to health, and are distinctly labelled as mixtures or compounds. And no prosecutions shall at any time be maintained under said act concerning any drug the standard of strength or purity whereof has been raised since the issue of the last edition of the United States Pharmacopœia, unless and until such change of standard has been published.

SEC. 5. The State Board of Health shall take cognizance of the interests of the public health relating to the sale of drugs and food and the adulteration of the same, and shall make all necessary investigations and inquiries in reference thereto, and for these purposes *shall* appoint inspectors, analysts and chemists, who shall be subject to its supervision and removal.

Within thirty days after the passage of this act the said board shall adopt such measures as it may deem necessary to facilitate the enforcement hereof, and shall prepare rules and regulations with regard to the proper methods of collecting and examining drugs and articles of food. Said board may expend annually an amount not exceeding *two* thousand dollars for the purpose of carrying out the provisions of this act; *provided*, however, that not less than two *thirds* of any annual expenditure shall be expended for the enforcement of the laws against the adulteration of milk and milk products, *and that none of said appropriation shall apply to alcoholic liquors.*

SEC. 6. Every person offering or exposing for sale, or delivering to a purchaser any drug or article of food included in the provisions of this act shall furnish to any analyst or other officer or agent appointed hereunder, who shall apply to him for the purpose and shall tender him the value of the same, a sample sufficient for the purpose of analysis of any such drug or article of food which is in his possession.

SEC. 7. Whoever hinders, obstructs, or in any way interferes with any inspector, analyst, or other officer appointed hereunder, in the performance of his duty, and whoever violates any of the provisions of this act, shall be punished by a fine not exceeding fifty dollars for the first offence, and not exceeding one hundred dollars for each subsequent offence.

SEC. 8. The State Board of Health shall report annually to the Legislature the number of prosecutions made under this chapter, and an itemized account of all money expended in carrying out the provisions thereof.

SEC. 9. An inspector appointed under the provisions of this chapter, and for the purpose of the enforcement of this act, shall have the same powers and

authority conferred upon a city or town inspector by Chapter five hundred and sixty of the Public Laws.

SEC. 10. *Whenever any officer or inspector shall take any sample from any person or place, he shall reserve a portion of the said sample and seal it immediately, and shall deliver said sealed part to the owner or possessor or agent or employé of said owner or possessor at the time of taking it, or at any subsequent time before a prosecution is commenced, provided he shall make a written request and gives a receipt for the same.*

SEC. 11. This act shall take effect on and after July 1, 1890.

The bill was referred to the Joint Standing Committee on Public Health, who gave public hearings and had private conferences, it was opposed by the legal fraternity, employed by parties engaged largely in the sale of adulterated food material, and advocated strongly by honest and honorable dealers in food products, and by other prominent citizens. It only remains to be said that the bill was never reported from the committee.

An article was written by the secretary and published in the *Monthly Bulletin* of the State Board of Health, as follows :

THE ADULTERATION OF FOOD.

The extent to which the adulteration of articles of food is subjected at the present day, is so enormous as to be really appalling. While it is so little apprehended by the general public, the facts are shown by the results of investigations by the National and State Governments, proceeding in the most deliberate, thorough and impartial manner, subjecting the materials to the most precise and exhaustive examinations by chemical analyses and scientific tests, performed by disinterested experts ; and by the unwilling testimony, under oath, of parties conversant with the methods of manipulation and materials used in the production of the deceptive adulterations.

Analytical examinations made by an expert State chemist not long since, showed that of 192 samples of jams, jellies and other provisions, 159 were found largely adulterated or not containing in *any part* the fruit represented by the labels. Many were composed of pomace, gelatine, glucose, starch, and other foreign substances, colored with aniline dyes and flavored with ethers, and other manufactured flavors.

Butter, supposed to be, and doubtless in many cases was, brought directly from country dairies, was found to be composed in some proportion of beef stearine, lard or cotton-seed oil, and so on through a long series of articles scarcely suspected.

Refined lard, so called, and having much the largest sale of any in the world, contains about one-fifth of pure lard and the rest cotton-seed oil, as admitted before a Congressional Committee by Mr. Fairbank, the largest manufacturer and dealer in America.

An investigation made by order of the State Board of Health of Rhode Island, resulted in showing that more than half of the milk sold in the stores in the various cities and towns in the State was adulterated below the legal standard, and a larger proportion still more or less adulterated, while molasses, bought for best quality, showed but one sample in every eight as true molasses, and vinegar was on about the same footing.

Indeed there are but few articles intended for food which are not in some way or another more or less subject to adulteration or substitution.

These of course are not in any large measure poisonous, but there are ingredients in many of the compounds which by slow advances are deleterious to health. As a corrective,

IS LEGISLATION NEEDED ?

If so, why? First, for protection of the public health. The standard of health in any State is the standard of enterprise and prosperity of that State. Although the larger part of the adulterations of food is of comparatively harmless materials, a very considerable part nevertheless is deleterious to health, by slow derangement of the functions of the body, and slow undermining of the physical constitution. Restriction of use of adulterated foods would inure to the welfare of the State by contributing to the public health.

Second, for the protection of the pocket, especially of that class, the wage-earners, upon whom the burden of the gigantic frauds most heavily falls.

Massachusetts, New York, New Jersey, Minnesota, and Ohio, have very efficient laws and efficient agencies in the work of the detection of adulterated goods. At the commencement of the investigation, the proportions in those States of fraudulent material consumed, inert or poisonous, were estimated at not less than from seventy-five cents to one dollar and twenty five cents per annum for each individual.

At the rate of one dollar per annum for every individual in Rhode Island, the cost to the citizens of the State of harmful and worthless stuff in the food consumed would amount to the enormous sum of three hundred and fifty thousand dollars, as the population now stands. This is not an overdrawn statement.

Third, because the advantages of legal inspection have been to very greatly restrict the amount of fraudulent goods in the markets of those States where active inspection work has been performed, in some instances even to reduce to less than one-fifth of the amount at the beginning of the inspection, which was doubtless less at that time than previously because of expected investigation.

Twenty-three States are known to have laws forbidding the sale of adulterated foods, some of them for special articles, with the result of driving fraudulent stuff out of those States into others where the sale is unrestricted.

Fourth, because protection would be given to the honest and upright dealers in family supplies. Without such protection they are at the mercy of dishonest and unscrupulous parties who undersell and ruin them in their honest business, while defrauding the public at large. The rights and interests of the fair-minded and honorable in all vocations should be respected and protected by law.

It is not merely health and pecuniary and business interests that are at stake, there are moral interests as well upon which the safety, the welfare and the

destiny of communities depend quite as much as upon financial success. The knowledge of the fact of the perpetuation of extensive fraud upon the great mass of the people in the line of dietaries, and without any measures being taken by the State government to convict or restrict such imposition, is an encouragement to greater acts of dishonesty, and to fraud in other directions, and a fruitful method of demoralizing the public conscience.

The following, in relation to condensed milk, was also published in the *Monthly Bulletin*.

CONDENSED MILK.

Some months ago, statements were rife in the newspaper press and in some medical periodicals, to the effect that a larger part of the brands or different proprietary preparations of condensed milk, were deficient in standard nutritive value, that is, were prepared from milk from which some proportion of the cream had been taken. The question seemed to be of sufficient importance to demand investigation, inasmuch as condensed milk was in large use in Rhode Island, and especially as a diet for infants.

Samples of each of the brands mostly in use in the State, covering in fact nearly the entire amount used, were procured and sent to Prof. J. H. Appleton for analysis, with the following result :

CHEMICAL LABORATORY OF BROWN UNIVERSITY,

PROVIDENCE, R. I., January 28, 1890.

Dr. C. H. FISHER,

Sec'y., State Board of Health.

Dear Sir : I hand you herewith a tabular statement giving the results of my analyses of eleven samples of *Condensed Milk* sent by you for examination.

In four cases no names of makers were given on the packages.

Sample No. 7 claims to be produced by evaporation of milk without addition of any substance to it. Ordinary condensed milk always has cane-sugar added during condensing.

Sample No. 8 was badly prepared. When I opened the can, the sample was as firm as soft cheese. It was evidently spoiled by some sort of fermentation.

In all the samples except No. 8 the amount of fat appears to indicate that whole milk was employed in the preparation.

Yours respectfully,

JOHN HOWARD APPLETON.

In relation to the above, the Secretary observed that sample No. 7 had a large excess of water, more than two-thirds the whole amount and nearly three times the proportion of some of the other brands, and was also deficient in fat and very largely deficient in other solids. The absence of cane sugar would account in some measure for the latter.

These deficiencies would very seriously impair the value of that brand for nutritive purposes. The solids, other than fats should contain the proteid or albumenoid substances—the flesh makers—and the carbohydrates—the tissue vitalizers—while the fats are principally warmth producers.

All however are in some measure inter-convertible and may serve a vicarious or a mutually common purpose.

Prof. Appleton does not give the relative proportions of the albumenoids to the fats (which was not requested), as an additional means of determining the proportion of the skimmed milk in the samples, as the amount of fats was deemed a sufficient indication.

Sample No. 8 was doubtless accidentally spoiled.

In December a new brand of condensed milk was found in the market (The Milk Maid), and that, with two others, was placed in the hands of a chemist for analysis, as will be seen by the following report :

Dr. CHARLES H. FISHER,

Sec'y., State Board of Health.

Dear Sir: The following is my report upon the analysis of condensed milk. Three samples were received, marked as follows :

Darling Brand Condensed Milk, made by the Michigan Condensed Milk Co.

Milk Maid Brand Condensed Milk, made by the Anglo-Swiss Condensed Milk Co.

Bell Brand Condensed Milk (maker unknown).

ANALYSIS.

	Darling Brand.	Milk Maid Brand	Bell Brand.
Water	25.17 pr ct.	30.05 pr ct.	28.21 pr ct.
Fat	11.29	9.18	10.58
Milk sugar.....	14.13	13.96	14.06
Cane sugar	37.41	36.07	36.76
Casein.....	10.11	8.76	8.44
Ash	1.89	1.98	1.95
	100.00	100.00	100.00

These samples are of good quality and appear to be made from unskimmed milk.

Very respectfully,

WALTER M. SAUNDERS.

For the purpose of ascertaining in a general way the probable extent and proportion of the adulteration of some of the articles in common use in Rhode Island, milk, molasses and vinegar were selected, and the work put in the hands of a competent chemist, whose report will be found below.

PROVIDENCE, R. I., Dec. 19, 1890.

Dr. CHARLES H. FISHER,

Sec'y., State Board of Health.

Dear Sir : I have the honor to make the following report upon the examination of milk, vinegar and molasses.

As directed by you, the articles were purchased in open market, as for best quality, and at full prices for the same, in the cities of Providence, Pawtucket, and Woonsocket, and in the towns of Bristol, Cranston, East Providence, Johnston, Lincoln, North Providence and Westerly.

Each sample was numbered in the order of purchase, and a record made of the date of purchase, the name of each retail dealer from whom purchased, and his address or place of business, the name of the wholesale dealer and his address, and the name and address of each party who was a producer and retailer of his own milk, for which account in detail with remarks, see Record Book sent herewith.

MILK.

84 samples of milk were examined. 48 samples or 57.14 per cent. contained less than the required 12 per cent. total solids, or $2\frac{1}{2}$ per cent. fat.

7 contained more than 12 and less than 13 per cent. total solids.

16	"	"	13	"	14	"	"
----	---	---	----	---	----	---	---

5	"	"	14	"	15	"	"
---	---	---	----	---	----	---	---

8	"	"	15 per cent. total solids.
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15 were colored with annatto.

Annotto is usually added to give the milk a rich cream appearance and also to hide the blue tint characteristic of skimmed milk.

VINEGAR.

29 samples of vinegar were examined. 16 or 55.17 per cent. contained less than the required 2 per cent. vinegar solids, or $4\frac{1}{2}$ per cent. absolute acetic acid.

18 specimens were true cider vinegar ; of this number 2 contained less than 2 per cent. vinegar solids, and 10 less than $4\frac{1}{2}$ per cent. absolute acetic acid.

The remaining 11 samples were vinegar other than cider, 6 of which contained less than $4\frac{1}{2}$ per cent. absolute acetic acid.

One sample was recognized as molasses vinegar.

MOLASSES.

16 samples were examined. 2 were true molasses, 6 contained from 10 to 60 per cent. added glucose, the rest consisted of little but glucose.

These samples were purchased as "best molasses," the prices ranging from 45 to 70 cents. per gallon.

Accompanying will be found tables giving the analysis for each sample.

Very respectfully,

WALTER M. SAUNDERS.

MILK ANALYSIS.

Sample Number.	Per cent. Water.	Per cent. Total Solids.	Per cent. Fat.	Per cent. Solids not Fat.	Per cent. Ash.	Coloring.
1	88.41	11.59	3.10	8.49	0.64	
2	89.37	10.63	2.89	7.74	0.56	
3	88.18	11.82	2.97	8.85	0.61	
4	90.04	9.96	2.57	7.39	0.48	
5	87.77	12.23	4.45	7.78	0.59	
6	88.78	11.22	1.54	9.68	0.73	
7	91.13	8.87	1.00	7.87	0.58	
8	88.89	11.11	3.21	7.90	0.57	
9	88.07	11.93	3.83	8.10	0.65	Annotto.
10	90.57	9.43	1.97	7.46	0.56	
11	89.15	11.85	3.62	8.23	0.61	
12	87.56	12.44	3.31	9.13	0.74	
13	89.86	10.14	2.75	7.39	0.62	
14	88.25	11.75	3.65	8.10	0.71	
15	87.44	12.56	5.00	7.56	0.59	
16	86.78	13.22	3.31	9.91	0.72	
17	88.15	11.85	3.32	8.53	0.65	
18	88.66	11.34	2.00	9.34	0.72	
19	88.40	11.60	3.47	8.13	0.63	Annotto.
20	88.26	11.74	2.98	8.76	0.72	Annotto.
21	86.99	13.01	3.89	9.12	0.67	
22	88.26	11.74	3.48	8.26	0.69	Annotto.
23	88.93	11.07	3.08	7.99	0.63	
24	89.85	10.15	2.20	7.95	0.61	
25	89.94	10.06	2.10	7.96	0.63	Annotto.
26	88.70	11.30	2.02	9.28	0.66	
27	91.22	8.78	1.66	7.12	0.55	Annotto.
28	88.70	11.30	3.21	8.09	0.62	
29	89.55	10.45	2.17	8.28	0.67	
30	88.34	11.66	4.18	7.48	0.54	Annotto.
31	86.97	13.03	3.11	9.92	0.72	
32	88.27	11.73	1.81	9.92	0.72	
33	81.90	18.10	9.04	9.06	0.66	
34	89.52	10.48	2.14	8.34	0.65	
35	86.89	13.11	3.35	9.76	0.71	
36	86.15	13.85	4.45	9.40	0.70	
37	87.87	12.13	2.28	9.85	0.72	
38	87.19	12.81	2.84	9.97	0.70	
39	86.60	13.40	4.74	8.66	0.58	

MILK ANALYSIS.—Continued.

Sample Number.	Per cent. Water.	Per cent. Total Solids.	Per cent. Fat.	Per cent. Solids not Fat.	Per cent. Ash.	Coloring.
40	89.67	10.33	2.30	8.03	0.56	Annotto.
41	89.92	10.08	2.18	7.90	0.57	Annotto.
42	88.50	11.50	3.52	7.98	0.60	
43	86.60	13.40	3.43	9.97	0.65	
44	88.80	11.20	3.16	8.04	0.56	
45	88.41	11.59	2.67	8.92	0.69	
46	88.83	11.17	3.11	8.06	0.60	
47	90.41	9.59	2.56	7.03	0.49	
48	89.00	11.00	2.65	8.35	0.62	
49	90.05	9.95	2.05	7.90	0.73	
50	88.01	11.99	3.12	8.87	0.65	
51	88.64	11.36	3.29	8.07	0.59	Annotto.
52	84.11	15.89	7.57	8.32	0.56	
53	89.51	10.49	2.24	8.25	0.61	Annotto.
54	86.16	13.84	4.14	9.70	0.74	
55	82.78	17.22	7.81	9.41	0.68	
56	87.22	12.78	3.41	9.37	0.69	
57	84.98	15.02	4.70	10.32	0.76	
58	82.84	17.16	7.92	9.24	0.70	
59	82.69	17.31	6.78	10.53	0.74	
60	85.80	14.20	5.13	9.07	0.67	
61	87.08	12.92	3.57	9.35	0.71	
62	86.09	13.91	4.96	8.95	0.68	
63	86.70	13.30	3.59	9.71	0.72	
64	88.31	11.69	3.89	7.80	0.62	Annotto.
65	88.58	11.42	3.55	7.87	0.62	Annotto.
66	86.69	13.31	3.47	9.84	0.71	
67	90.36	9.64	2.83	6.81	0.52	Annotto.
68	88.99	11.01	1.62	9.39	0.70	
69	85.41	14.59	5.43	9.16	0.63	
70	87.74	12.26	2.24	10.02	0.75	
71	89.65	10.35	2.71	7.64	0.55	Annotto.
72	90.17	9.83	1.00	8.83	0.69	
73	86.92	13.08	3.61	9.47	0.70	
74	86.11	13.89	3.97	9.92	0.73	
75	86.15	13.85	4.17	9.68	0.73	
76	90.22	9.78	1.64	8.14	0.70	
77	87.01	12.99	2.95	10.04	0.75	
78	82.17	17.83	8.91	8.92	0.67	
79	86.39	13.61	4.18	9.43	0.74	
80	75.77	24.23	15.22	9.01	0.64	
81	85.63	14.37	4.49	9.88	0.68	
82	85.12	14.88	5.26	9.62	0.71	
83	85.47	14.53	4.83	9.70	0.70	
84	86.11	13.89	4.04	9.85	0.70	

MOLASSES.

Number of Samples, Place of Purchase, etc.

Sample Number.	Retail Dealer.	Street and Number.	Town or City.	Wholesale Dealer.	Address.	Date of Purchase.	Price per Gallon.	Kind.	Proportion of Glucose.
1	Woonsocket...	.....	Worcester, Mass.	Nov. 24	70 cents.	Porto Rico...	10 per cent.
2	"	Providence	" 24	60 "	New Orleans.	60 "
3	Central Falls..	.....	"	" 28	65 "	"	15 "
4	Pawtucket.....	.....	"	" 28	50 "	"	95 "
5	Westerly ...	.....	New York.....	Dec. 3	65 "	"	"
6	"	"	" 3	65 "	"	"
7	"	Providence.....	" 3	65 "	"	"
8	Bristol.....	.....	"	" 4	60 "	"	15 "
9	"	"	" 4	55 "	"	95 "
10	Providence...	.....	"	" 9	48 "	Porto Rico...	90 "
11	"	"	" 9	60 "	New Orleans.	90 "
12	"	"	" 9	45 "	"	90 "
13	"	"	" 9	65 "	"	90 "
14	"	"	" 9	50 "	"	25 "
15	"	"	" 9	65 "	"	95 "
16	"	Providence.....	" 9	50 "	"	95 "

VINEGAR.

Table giving result of Analysis of each Sample.

Sample No.	Per cent. Absolute Acetic Acid.	Per cent. Vinegar Solids.	Kind of Vinegar.	Sample No.	Per cent. Absolute Acetic Acid.	Per cent. Vinegar Solids.	Kind of Vinegar.
1	4.10	0.21	Not cider.	16	4.51	3.09	Cider vinegar.
2	4.42	2.38	" "	17	4.10	2.01	" "
3	4.51	0.99	" "	18	2.30	3.06	" "
4	5.04	0.25	" "	19	4.15	0.72	Not cider.
5	4.36	0.29	" "	20	2.75	7.65	Molasses vinegar.
6	5.95	3.29	Cider vinegar.	21	5.54	2.12	Cider vinegar.
7	3.06	4.12	" "	22	5.77	1.36	" "
8	4.15	3.98	" "	23	4.51	0.35	Not cider.
9	4.01	0.25	Not cider.	24	3.88	2.82	Cider vinegar.
10	4.73	2.72	Cider vinegar.	25	4.78	3.62	" "
11	4.07	2.39	" "	26	5.14	2.41	" "
12	5.25	2.20	" "	27	3.79	1.79	" "
13	3.38	2.58	" "	28	2.62	2.18	" "
14	3.65	3.60	" "	29	4.37	0.22	Not cider.
15	4.52	0.25	Not cider.				

ANALYSIS OF SOME PUBLIC WATERS.

A feeling of insecurity in the use of water from the public water supplies, as to freedom from danger to health, pervaded a number of communities during the late autumn months of 1890, and the Secretary was interviewed not infrequently, at the office, on the streets, in the steam and horse cars, and elsewhere, in relation thereto. From what source or sources the feeling of apprehension had its origin it was impossible to ascertain. Possibly the proprietors and vendors of pure spring or distilled water were unintentionally among the factors. It was sufficient however to know that such fears had existence, and a promise was made that the water used by the communities interested should have the question solved so far as chemical analysis could determine it. It should be said, however, that the Abbott's Run water was but slightly questioned in comparison with others.

In furtherance of the promise, water was collected by responsible parties from the ultimate taps or faucets in dwelling houses or offices, and forwarded to the Chemical Laboratory of Brown University. The analyses were made by Prof. Appleton and a verbal report made at an early day, although the formal report was delayed.

Below will be found the results of the analysis and the formal report.

CHEMICAL LABORATORY OF BROWN UNIVERSITY,

PROVIDENCE, R. I., March 7, 1891.

Dr. CHARLES H. FISHER,

Secretary, State Board of Health.

Dear Sir: I respectfully submit to you the following report upon certain samples of water from the water supplies of several municipalities in Rhode Island, namely: Providence, Pawtucket, Woonsocket, Warren, East Greenwich. All these samples were taken not far from December 20, 1890. The numerical results of the analyses are given in the following table:

MEMORANDUM OF WATER ANALYSIS.

The larger figures signify parts (by weight) in one million parts of water, (by weight).

The smaller figures signify grains per American gallon of water (weighing 58,372.2 grains).

Location, etc.	Total Residue.	Organic and Volatile Matter.	Mineral Matter.	Common Salt.	Albuminoid Ammonia.	Ready- formed Ammonia.
Providence supply....	44. 2.568	15. .876	29. 1.692	4.99 .291	0.24 .0140	0.02 .0012
Pawtucket supply....	35. 2.043	18. 1.051	17. .992	4.22 .246	0.16 .0093	0.02 .0012
East Greenwich supply.....	41. 2.393	20. 1.167	21. 1.226	4.82 .281	0.20 .0117	0.02 .0012
Warren supply.....	57. 3.327	28. 1.634	29. 1.693	11.45 668	0.32 .0187	0.04 .0023
Woonsocket supply..	42. 2.452	24. 1.401	18. 1.051	3.61 .211	0.20 .0117	0.02 .0012

In connection with the table, I offer the following comment:

Total Residue.—These terms are intended to express the sum total of solid matters obtained when a portion of the water is evaporated to dryness under suit-

able conditions. It is a valuable index of the general character of a sample of water.

In all the samples under examination, the total residues were small. They afford a favorable impression of the waters under consideration.

Organic and Volatile Matter. Mineral Matter.—When the total residue obtained from a portion of water is heated to redness in a platinum dish, some of the matter is burned or volatilized while some of it remains in the dish, practically unchanged. The first class includes mainly animal and vegetable matters. The second class includes mainly mineral matters.

In the waters in question, the amounts of both of these kinds of matter were comparatively small, and afforded a favorable general suggestion as to the character of the waters.

Common Salt.—This substance, while found in practically all natural waters and while not injurious in itself, is usually considered worthy of careful attention in water analyses; for house waste and house sewage, whether from kitchen sinks or water-closets, usually contains large quantities of salt. In well-waters, the presence of considerable salt is generally accepted as an indication of sewage pollution. It may be noted that in some cases, as of well-waters near the sea-side, presence of salt may be satisfactorily accounted for in other and proper ways.

In none of the waters now under consideration was the amount of salt excessive. I judge that the larger amount found in the sample from Warren was due to its proximity to Narragansett Bay.

Albuminoid Ammonia. Ready-formed Ammonia.—One of the best means of measuring the amount of animal matter in a sample of water is by a determination of the amount of some nitrogenous compound in it. Ammonia is such a compound. The coarser varieties of animal matter yield, by suitable chemical analysis, what is called albuminoid ammonia. Some kinds of animal matter, however, yield ready-formed ammonia. Even minute amounts of these substances in drinking water are considered significant. Fortunately, extremely delicate methods have been devised for the detection of them.

An inspection of the table will show that the amounts of ammonia reported are not very different in the several samples, and that they are not very large in any of them.

In conclusion, I think I am warranted in expressing the opinion, based upon the chemical analyses made, that the several public water supplies of Rhode Island, herein discussed, afford water of good quality and well suited to domestic and manufacturing uses.

Yours respectfully,

JOHN HOWARD APPLETON.

APPENDIX.

PUBLIC STATUTES.

CHAPTER 83.

OF THE STATE BOARD OF HEALTH.

SECTION 1. The governor with the advice and consent of the senate shall appoint six persons, two from the county of Providence and one from each of the other counties, who shall constitute the state board of health, one of whom shall be appointed in each year for the term of six years from the first day of July. Any appointment to fill a vacancy shall be for the remainder of the term. Of the persons so appointed, at least three shall be well educated physicians and members of some medical society incorporated by the state. The governor may remove any member for cause, at any time, upon the written request of two-thirds of the board.

SEC. 2. The board shall take cognizance of the interests of life and health among the citizens of the state ; they shall make investigation into the causes of disease, and especially of epidemics and endemics among the people, the sources of mortality, and the effects of localities, employments, conditions and circumstances on the public health, and shall do all in their power to ascertain the causes and the best means for the prevention of diseases of every kind in the state. They shall publish and circulate, from time to time, such information as they may deem to be important and useful for diffusion among the people of the state, and shall investigate and give advice in relation to such subjects relating to the public health, as may be referred to them by the general assembly or by the governor when the general assembly is not in session.

SEC. 3. The state board of health shall also investigate the subject of diseases among cattle or other animals.

SEC. 4. The board shall meet in the city of Providence once in three months, and as much oftener as they may deem necessary. No member of the board, except the secretary shall receive any compensation for his services ; but the actual personal expenses of any member, while engaged in the duties of the board, shall be paid by the state.

SEC. 5. The board shall elect a well qualified physician as their secretary, who shall be *ex-officio* a member of the board, the commissioner of public health and state registrar, but he shall not be permitted to vote on any question in which he is personally interested or be entitled to any additional compensation for mileage or expenses.

SEC. 6. The secretary of the board shall make inquiry from time to time, of the clerks of town and local boards of health and practising physicians in relation to the prevalence of any disease, or knowledge of any known or generally believed source of disease or causes of general ill-health, and also in relation to the proceedings of the said boards of health, in respect of acts for the promotion and protection of the public health, and also in relation to diseases among domestic animals in their several towns ; and the said clerks of town and local boards of health and said practising physicians shall give information, in reply to said inquiries, of such facts and circumstances as shall have come to their knowledge.

“SEC. 7. The secretary shall perform and superintend the work prescribed for said board by law and such other duties as the board may require ; he shall prepare and publish in every calendar month a general summary of all the deaths and causes of the same which had occurred in the state during the preceding month, the same to be made up from returns of deaths which shall be sent to him on or before the tenth day of the month following the date of such deaths, by the several town and city clerks and the city registrar of Providence city ; he shall also prepare and publish for general distribution a monthly circular giving information and advice in regard to the preservation of health, suitable for each particular season, and giving also such information as he shall deem of advantage to the public, as to the prevalence and character of infectious diseases of domestic animals, and for such service he shall receive the sum of seventeen hundred dollars annually, or such proportion thereof as the said board may determine. He shall hold his office during the pleasure of the board and may be removed at any regular meeting by a majority vote of the members of said board.”

SEC. 8. The governor shall provide a suitable office for the board in the city of Providence, and the actual expenses of the board and of the members thereof, when certified by the chairman and approved by the governor shall be paid from the state treasury.

SEC. 9. The board shall make a report in print to the general assembly, annually, of its proceedings during the year ending on the thirty-first day of December next preceding, with such suggestions in relation to the sanitary laws and interests of the state as they shall deem important.

ADDITIONS TO THE LIBRARY.

BOOK EXCHANGES, 1890.

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Conn. Annual Report of the State Board of Health, 1889.
N. Y. Annual Report of the State Board of Health, 1889.
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D. C. Annual Report of Health Officer, 1889.
Kans. Annual Report of the State Board of Health, 1889.
Md. Biennial Report of the State Board of Health, 1888-9.
La. Biennial Report of the State Board of Health, 1889.
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Maine. Annual Report of the State Board of Health, 1889.
U. S. Proceedings of National Conference of State Boards of Health, 1889.
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Ill. Official Register of Physicians and Midwives, 1889.
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U. S. Annual Report Supervising Surgeon General Marine Hospital Service, 1889.
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U. S. Circulars, Abstract of Sanitary Reports, etc., of Marine Hospital Service, 1889.

- Mich. Proceedings of Sanitary Convention, 1889.
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- R. I. City Manual, Providence, 1890.
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- R. I. Report State Auditor, 1889.
- R. I. Report of Commissioner of Labor Statistics, 1889.
- Registration Report, Mass., 1889.
- “ “ N. H., 1889.
- “ “ Vt., 1888.
- “ “ Mich., 1888.
- “ “ Ont., Can., 1888.
- “ “ (52d) Registrar General, Eng.
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- “ “ Registrar General, Scotland, monthly, 1889.
- “ “ Kingdom of Italy, 1889.
- “ “ Dominion of Canada—Mortality of Cities, 1889.
- “ “ Austro-Hungary, 1889.
- U. S. Index Catalogue, Library Surgeon-General's Office, U. S. A., Vols. x and xi., O to Re.
- U. S. Agricultural Department. Reps. 1889.
- “ Report, Sorghum Manufacture.
- “ “ Foods, and adulterants of.
- “ “ Bureau of Animal Industry.
- U. S. Annual Report Commissioner of Labor Statistics, 1889.
- Mass. Annual Report Commissioner of Labor Statistics, 1889.
- R. I. Annual Report Commissioner of Labor Statistics, 1889.
- “ 21st Annual Report of the Board of State Charities and Corrections, 1889.
- “ Second Inaugural Address of Henry R. Barker, 1890.
- “ Report of the Trustees and Superintendent of Butler Hospital for the Insane, 1889.
- R. I. Proceedings of the R. I. Historical Society, 1889-90.
- “ Prevention of Insanity and Nervous Diseases.

R. I. Second Annual Report of the Board of Managers of R. I. State Agricultural School and Experiment Station, 1889.

R. I. Adoption of the Federal Constitution by R. I., 1790-1890, by Gen. Horatio Rogers.

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" Registration Report, 1888.

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" " " " " Tecumseh, June, 1889.

" " " " " Ludington, July, 1889.

" " " " " Pontiac, Oct., 1889.

" " " " " Vicksburg, Dec., 1889.

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" Extracts from Remarks made before the State Sanitary Convention at Pittsburg, Pa., by Benjamin Lee, M. D.

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GENERAL INDEX.

Adulteration of Food and Drugs.....	174
Annual Reports of Medical Correspondents	24-49
" " " Town Clerks	56-90
" " " Health Officers.....	96
Appleton, Prof. J. H.....	179, 187
Barker, Dr. C. F.....	99
Barometer, readings of, 1881-1890.....	153-160
Block Island, temperature of	160
Board, members of.....	2
Cattle Commission	166
Chandler, A.....	98
Chapin, C. V., Superintendent of Health of Providence City	109
Cholera Infantum*	152
Cloud, amount of, 1890.....	155
Coggeshall, T., Mayor	60
Comparative prevalence of acute diseases, 7 years.....	145-152
Conroy, M. B.....	97
Cook, I. T.....	106
Cottrell, J. B.....	99
Croup*.....	152
Darling, Edwin, Superintendent's Report.....	73
Diarrhœa*.....	152
Diphtheria*	119, 152
Diseases, comparative prevalence of twelve acute, 1884-1890	145-152
Dysentery*.....	152
Fever, intermittent.....	152
" typhoid.	123, 152
Food, Adulteration of.....	174
" Adulterated, Bill to restrict sale of.....	175
Glanders.....	166
Goodwin, A. K., Mayor.....	140

* See Index to Thirty-Seventh Registration Report. Part II of this Report.

Gray, S. M., C. E	11
Green, J. B.....	108
Health, officers of, in Rhode Island, reports of.....	96-144
Humidity, monthly means of, 1881-1890.....	155
Influenza.....	12
Intermittent fever*.....	152
Kaull, P. S.....	99
Kinnecom, S. E.....	108
Leonard, Dr. C. H.....	109
Library, additions to.....	191
Malarial diseases*.....	152
Measles*.....	152
Meteorology.....	153
Meteorological tables.	154-160
Milk, analysis of.....	179-184
Molasses, analysis of	185
Mowry, H. F.....	107
Newport Board of Health	99
Owen, J.....	107
Pawtucket Water Commission, extracts from report of Superintendent ...	73
Pawtuxet water, analysis of	187
Peck, Geo. H.....	96
Peckham, J.....	98
Pneumonia*	152
Pierce, T. W.....	142
Pond, D. B., Mayor	86
Powel, J. H.....	99
Quigley, W. H.....	108
Rainfall, 1881-1890	154-160
Rankin, Dr. F. H.....	99
Registration Reports.....	162
Remington, G. W.....	142
Reports for 1890 :	
Annual of physicians.....	20
Annual of town clerks	56
Medical correspondents, annual	22
Of Doctors : Arnold, B	40
Arnold, H.....	34

* See Index to Thirty-Seventh Registration Report.

Reports of Doctors—Continued.

Barnard, C. A	36
Bouvier, S. A.	35
Briggs, A. B.	44
Chapin, C. V.	109
Chase, J. A.	37
Church, G. L.	25
Cook, I. S.	41
Fuller, F. B.	36
Harris, G. A.	32
Haines, G. B.	31
Hersey, G. D.	39
Hunt, S.	33
Jenckes, G. W.	141
Kenyon, E. E.	47
Legris, M. J. E.	28
Maryott, C. E.	44
Monroe, W. C.	42
Morgan, J. H.	48
Neylan, D. J.	25
Ormsbee, C. L.	30
Perry, J. E.	46
Pierce, A. C.	26
Potter, A.	32
Redfield, P. S.	38
Ridge, J. S.	47
Rose, H. W.	143
Saunders, A. A.	43, 142
Smith, F. B.	29
Smith, W. J.	39
Sprague, A. G.	27, 97
Swan, H. S.	24
Taylor, P. K.	45
Turner, H. E.	99
Winsor, J.	28
Yale, C. H.	30

Reports from towns for 1890..... 24-144

Town clerks (clerks of local boards of health)..... 56-90

Allen, E. R. 88

Andrews, B. A. 67

Reports of Town Clerks—Continued.

Angell, T. H.....	66
Bennett, H. F.....	56
Brownell, F. R.....	59
Caswell, W. H.....	88
Chase, A. L.....	59
Chase, P. B.....	63
Clarke, H. P.....	89
Cook, J. T.....	63
Crombe, C. T.....	89
Cross, G. C.....	87
Edwards, J. H.....	88
Farnum, C. W.....	65
Griffin, S. W.....	57
Hoxsey, W.....	90
King, W. F.....	66
Kinion, P. F.....	64
Lockwood, J. T.....	58
Lyon, E. D.....	65
Mason, C. B.....	56
Mowry, Alvah.....	64
Perry, H. B.....	89
Remington, D. H.....	67
Rose, A. N.....	68
Rogers, J. S.....	109
Smith, E. B.....	66
Stanhope, E.....	57
Sweet, W. N.....	58
Sweetland, T. A.....	65
Tobey, O. A.....	67
Waterman, D. & D.....	64
Weeden, C. E.....	59
Wood, Mark H.....	56
Saunders, W. M.....	181-183
Scarlatina*.....	115, 152
Sewerage, Newport city.....	61
“ Providence.....	81
“ Pawtucket.....	71

* See Index to Thirty-Seventh Registration Report.

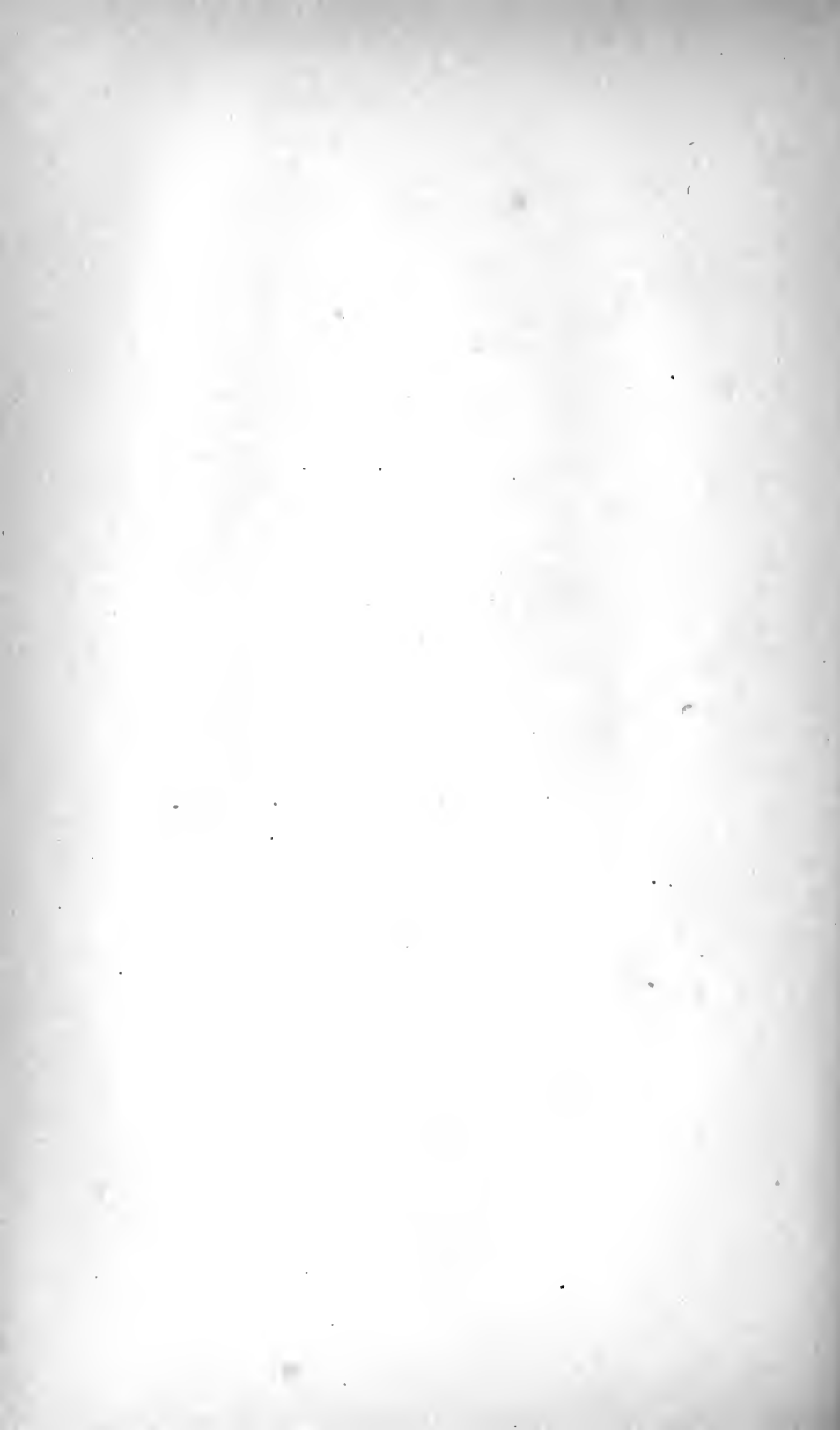
Sewerage, Woonsocket.....	86
Smith, Charles Sydney, Mayor ..	79
State Board of Health, Statute Law....	189
Swarts, Dr. G. T.....	140
Tables, showing prevalence of acute diseases, 1884-1890.....	146-152
" Water analysis.....	138
" Meteorological.....	154-160
Temperature, 1881-1890.....	154-160
Towns, reports from, for 1890.	
Barrington.....	25, 26, 55, 96
Bristol.....	24, 56, 96
Burrillville.....	32, 64, 107
Charlestown.....	43, 87, 142
Coventry.....	28, 57
Cumberland.....	31, 64
Cranston.....	64
East Greenwich.....	57
East Providence.....	26, 33, 65
Exeter..	47, 88, 142
Foster.....	34, 65
Glocester.....	32, 65, 107
Hopkinton.....	44, 88
Jamestown.....	59, 98
Middletown.....	59, 98
Johnston.....	35, 41, 66
Lincoln.....	35, 66, 108
Little Compton...	59
Narragansett.....	88
North Smithfield.....	42, 67, 108
North Kingstown.....	44, 89, 142
Newport City.....	98
New Shoreham.....	63
North Providence.....	35, 66, 108
Portsmouth.....	63, 106
Pawtucket.....	35, 36, 67, 140
Providence.....	38, 78, 109
Richmond.....	43, 89
Scituate.....	39, 40, 67
Smithfield.....	35, 41, 67

Towns, reports from, 1890—Continued.

South Kingstown.....	45-47, 89
Tiverton.....	30, 63, 106
Warren.....	25, 57, 97
Warwick.....	27, 58, 97
West Greenwich.....	30, 58, 97
Westerly.....	48, 90, 143
Woonsocket.....	42, 85, 141
Tuberculosis in cattle.....	167
“ Diagnosis of.....	167
Typhoid fever*.....	123, 152
Veterinary Profession.....	172
Vinegar, analysis of.....	186
Vital statistics.....	161
Water, Pawtuxet, analysis of.....	138, 187
“ East Greenwich, “.....	187
“ Pawtucket, “.....	187
“ Providence, “.....	187
“ Warren, “.....	187
“ Woonsocket, “.....	187
“ Public supplies of.....	186
Whooping cough*.....	152
Winds, direction and velocity of, 1881-1890.....	154-160

* See Index to Thirty-Seventh Registration Report.





THIRTY-SEVENTH REPORT

UPON THE

REGISTRATION

OF

Births, Marriages and Deaths,

IN THE

STATE OF RHODE ISLAND

FOR THE

YEAR ENDING DECEMBER 31, 1889.

PREPARED BY

CHARLES H. FISHER, M. D.,

STATE REGISTRAR OF VITAL STATISTICS; SECRETARY OF THE STATE BOARD OF HEALTH;
COMMISSIONER OF PUBLIC HEALTH.

PROVIDENCE:

E. L. FREEMAN & SON, STATE PRINTERS.

1890.

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CHARLES H. FISHER, *Secretary*,

Commissioner of Public Health and State Registrar of Vital Statistics.

State of Rhode Island and Providence Plantations.

OFFICE OF THE STATE REGISTRAR OF VITAL STATISTICS.

PROVIDENCE, December, 1890.

To the Honorable the General Assembly:

The Thirty-Seventh Annual Report upon the Registration of Births, Marriages and Deaths in Rhode Island, during the year 1889, with compendary Tables of the results of registration in previous years, is herewith respectfully submitted.

The plan of preceding years, in regard to the general arrangement of the Tables, summaries and comments, has been followed in this report, with some additional Tables, and a few special changes made to meet certain requirements.

In the special Tables the object has been to present the important facts of many years of registration, as well as of single years, in such manner as to make them readily apparent, and relieve the reader of the statistics of much of the labor of personal examination of the general Tables of the preceding reports, for the purpose of ascertaining the relation the various facts bear to each other.

In the computation of the ratios of births, marriages and deaths, in proportion to the population, it will be obvious that absolutely exact results cannot be obtained for non-census years, inasmuch as the exact population cannot be known in other than those years in which a census of the population is taken.

The plan, therefore, adopted of late years in the preparation of the reports, has been to obtain from the officials of the different towns and cities the estimated population of their respective towns and cities in the middle of the year, according to their best knowledge and belief. The data thus obtained has served as a basis for the rate computations for the different civil divisions.

The estimate of the population of the State, at the middle of the year 1889, upon which the birth, marriage and death-rates for the State are computed, was obtained by assuming that the rate of increase of population, since the taking of the census in the middle of the year 1885, had been the same as during the years between the two last census enumerations. No other method seemed to present results so approximate and trustworthy.

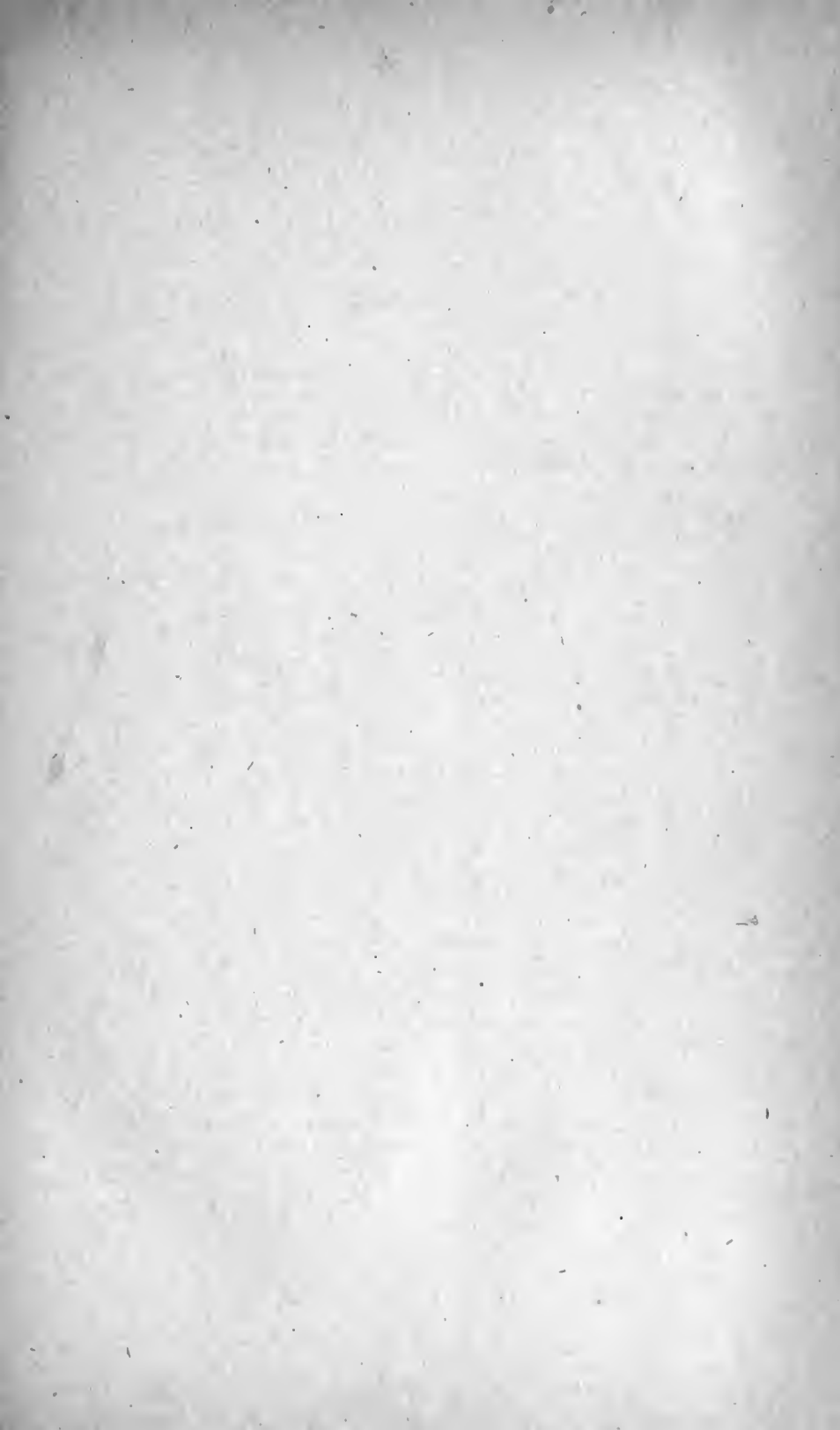
The population, by the United States census of 1890, had not been taken when the preliminary and fundamental Tables of this report were made up, and, therefore, there was no other proper basis for estimating the population for 1889 than the State census of 1885. Inasmuch as the percentage of gain in the population, from 1885 to 1890, was nearly one per cent. a year greater than the average of the ten years preceding 1885, therefore the estimates for the State, during the last three or four years, were less than the actual population by nearly one per cent. each year.

The reports upon the records of the vital movements of the population of Rhode Island have acquired a reputation not confined to our own country, as statisticians in several countries in Europe, as well as in America have been annual solicitors for copies for governmental, corporate and private use. It is the aim of the Registrar to make them as perfect as possible, and, therefore, entirely trustworthy.

With great respect,

CHAS. H. FISHER,

State Registrar.





CONTENTS.

See INDEX, page 251.

GENERAL TABLES.

TABLE I. General summary of the births, marriages and deaths, in 1889, in each town and each county in the State, showing the number of births, the sex and parentage of those born; the number of marriages, with the nativity of those married; the number of deaths, with the sex and parentage of those who died; the aggregate and average age of the decedents of each sex, and of the whole number of decedents whose age was given.....	2-5
TABLE II. Births; showing the number of each sex born in each month of the year, in the several divisions of the State.....	6-7
TABLE III. Plurality births; arranged by months, sexes and divisions of the State, and showing the nativity of the parents.....	8
TABLE IV. Marriages; the number in each month, and in each quarter of the year, in the several divisions of the State.....	9
TABLE V. Deaths; showing the number of decedents of each sex in each month, in the several divisions of the State.....	10-11
TABLE VI. Deaths; showing the number of each sex that died at certain stated periods of life, in each town and division of the State; also the estimated population of every town and division, with the percentage of deaths to population.....	12-17
TABLE VII. Causes of death, and season, in 1889; arranged alphabetically, showing the number of decedents of each sex from each cause, in each month and in the whole year, and also the number of native and of foreign parentage for the whole year.....	18-29
TABLE VIII. Causes of death and age; arranged alphabetically, and showing the number of decedents of each sex from each cause, in each period of life.....	30-41
TABLE IX. Classification and percentage; showing the number and percentage of deaths from each cause and in each class of causes, in the whole State, and in each division of the State.....	42-49
TABLE X. Nosological classification of causes of death in Rhode Island, in each of thirty-six years, 1854-1889.....	50-65
TABLE XI. Occupations and ages at death; showing the number and the aggregate and average age at death of the decedents, in each occupation and class of occupations, in the whole State, ages under 20 omitted ...	66-76
TABLE XII. Occupations and causes of death; showing the number in each occupation and class of occupations, who died by each specified cause, omitting ages under 20.....	77-89
TABLE XII. Supplementary.....	90-91

SPECIAL TABLES, RESULTS AND COMMENTS.

Births, Marriages and Deaths.....	94-103
Diagram I. Birth-Rates.....	106
BIRTHS. Special Results. Tables XVII-XXX.....	109-125
MARRIAGES. Special Results. Tables XXXI-XLIII.....	126-138
DIVORCES. Tables XLIV-XLVI.....	139-144
" Ratio of to marriage, different States. Table.....	144
DEATHS. Special Results. Tables XLVII-XCH.....	145
Diagram II. Death-Rates.....	160
Diagram III. " "	227
Nomenclature of Diseases. Appendix.....	229
Suggestions Concerning Physicians' Certificates of Death.....	238
Laws in relation to Vital Statistics.....	241
" " Divorce.....	247
Index.....	251

REPORT UPON THE REGISTRATION
OF
BIRTHS, MARRIAGES AND DEATHS
IN
RHODE ISLAND,
FOR THE
YEAR ENDING DEC. 31, 1889,
AND
FOR VARIOUS PERIODS FROM 1853 TO 1889 INCLUSIVE.

TABLE I.

*General Summary of Births, Marriages and Deaths, in the
State of Rhode Island during the year 1889.*

TOWNS AND DIVISIONS OF THE STATE.	BIRTHS, 1889.							MARRIAGES, 1889.					
	Whole Number.	SEX.		PARENTAGE.				Whole Number.	NATIVITY.				
		Males.	Females.	American.	Foreign.	Am. Father. For. Mother.	For. Father. Am. Mother.		American.	Foreign.	Am. Groom. For. Bride.	For. Groom Am. Bride.	
Barrington.....	25	10	15	13	7	2	3	5	3	1	1	...	
Bristol.....	104	45	59	48	31	11	14	37	27	7	2	1	
Warren.....	102	49	53	33	55	7	7	33	13	17	1	2	
BRISTOL COUNTY.....	231	104	127	94	93	20	24	75	43	25	4	3	
Coventry.....	104	58	46	41	55	3	5	23	18	2	2	1	
East Greenwich.....	68	40	28	39	20	5	4	37	20	8	5	4	
West Greenwich.....	10	8	2	9	1	...	...	5	5	...	...	...
Warwick.....	424	227	197	116	228	40	40	159	46	73	15	25	
KENT COUNTY.....	606	333	273	205	304	48	49	224	89	83	22	30	
Jamestown.....	5	2	3	5	...	...	...	5	5	...	...	...
Little Compton.....	20	12	8	19	1	...	...	11	11	...	...	...
Middletown.....	25	14	11	18	6	...	1	5	5	...	...	...
NEWPORT CITY.....	712	359	353	295	283	64	70	135	77	34	13	11	
New Shoreham.....	28	14	14	27	...	...	1	7	7	...	...	...
Portsmouth.....	17	12	5	14	1	...	2	11	11	...	...	...
Tiverton.....	79	46	33	37	34	6	2	16	12	2	2	...	
NEWPORT COUNTY.....	886	459	427	415	325	70	76	190	128	36	15	11	
Burrillville.....	74	35	39	26	39	4	5	40	23	8	3	6	
Cranston.....	154	82	72	77	53	15	9	42	25	7	2	8	
Cumberland.....	195	97	98	57	106	19	19	89	21	41	11	16	
East Providence.....	115	68	47	58	36	10	11	65	49	9	4	3	
Foster.....	23	7	16	23	...	...	...	12	10	...	1	1
Glocester.....	54	30	24	31	10	5	8	6	5	1	...	...
Johnston.....	251	127	124	99	108	17	27	41	23	11	5	2	
Lincoln.....	595	308	287	85	391	53	66	136	39	70	12	15	
North Providence.....	48	23	25	17	18	7	6	2	2	...	...	...
North Smithfield.....	65	38	27	13	40	3	9	23	6	13	1	3	
PAWTUCKET.....	655	330	325	224	271	92	68	278	145	61	35	37	
PROVIDENCE CITY.....	3,173	1,598	1,575	1,134	1,391	306	342	1,367	670	415	124	128	
Scituate ..	61	25	36	50	5	4	2	38	32	1	3	2	
Smithfield.....	47	23	24	21	17	6	3	23	11	7	4	1	
WOONSOCKET.....	563	284	279	108	362	41	52	205	71	80	21	33	
PROVIDENCE COUNTY....	6,073	3,075	2,998	2,017	2,847	582	627	2,367	1,132	754	226	255	
Charlestown.....	17	8	9	15	1	...	1	5	5	...	...	...
Exeter.....	8	6	2	8	...	...	...	4	4	...	...	...
Hopkinton.....	58	31	27	48	8	1	1	39	36	1	2	...	
Narragansett.....	21	13	8	16	1	2	2	4	4	...	...	...
North Kingstown.....	67	36	31	42	9	11	5	24	23	...	...	1
South Kingstown.....	90	46	44	77	6	3	4	29	25	...	2	2	
Richmond.....	47	21	26	34	5	2	6	3	2	1	...	...
Westerly.....	116	61	55	49	57	2	8	65	48	8	3	9	
WASHINGTON COUNTY...	424	222	202	289	87	21	27	173	147	10	7	9	

TABLE I.—Continued.

*General Summary of Births, Marriages and Deaths, in the
State of Rhode Island during the year 1889.*

DEATHS, 1889.

Whole Number.	SEX.		PARENTAGE.		Ages Given.		Aggregate Age in years.		Average Age in years.		Aggregate Age in years of all.	Average Age in years of all.
	Males.	Females.	American.	Foreign.	Males.	Females.	Males.	Females.	Males.	Females.		
21	8	13	15	6	8	13	204	412	25.50	31.69	616	29.33
86	44	42	51	35	43	42	1,905	1,896	44.30	45.14	3,801	44.72
101	54	57	42	59	54	57	1,869	1,547	34.61	32.87	3,416	33.82
208	106	102	108	100	105	102	3,978	3,855	37.89	37.79	7,833	37.84
100	48	52	80	20	48	52	1,431	1,527	29.82	29.37	2,958	29.58
58	21	37	41	17	21	37	645	1,052	30.71	44.65	2,297	39.60
18	6	12	16	2	6	12	240	626	40.00	52.18	866	48.11
281	138	143	109	172	134	143	3,293	4,135	24.57	28.92	7,428	26.82
457	213	244	246	216	209	244	5,609	7,940	26.84	32.54	13,549	29.89
4	1	3	4	.....	1	3	49	75	49.00	25.00	124	31.00
8	5	3	7	1	5	3	328	242	65.60	80.67	570	71.25
17	6	11	17	.....	6	11	446	491	74.33	44.64	937	55.11
323	158	165	193	130	158	165	6,211	7,167	39.30	43.44	13,378	41.42
20	7	13	20	.....	7	13	243	757	34.71	58.23	1,000	50.00
20	12	8	17	3	12	8	796	474	64.89	59.25	1,270	63.50
50	32	18	31	19	32	18	1,084	760	33.88	42.22	1,844	36.88
442	221	221	289	153	221	221	9,157	9,966	41.43	45.09	19,123	43.26
99	53	46	38	61	53	46	1,605	1,594	30.26	34.66	3,199	32.31
103	49	54	63	40	49	54	1,979	2,277	40.39	42.17	4,256	41.32
141	72	69	48	93	72	69	1,780	2,141	24.72	31.03	3,921	27.81
130	60	70	80	50	59	70	2,479	2,299	42.02	32.84	4,778	37.04
25	17	8	25	.....	17	8	921	430	54.18	53.75	1,351	54.04
41	18	23	28	13	18	23	987	635	54.83	27.61	1,622	36.56
132	68	64	50	82	68	64	1,498	1,843	22.04	28.78	3,341	25.31
355	173	182	71	284	173	182	3,565	5,053	20.61	27.76	8,618	24.25
31	17	14	11	20	17	14	638	481	37.53	34.36	1,119	34.16
62	31	31	23	39	31	31	1,156	1,157	37.29	37.32	2,313	37.31
524	239	285	182	342	237	283	7,297	11,028	30.79	38.97	18,325	35.21
2,516	1,260	1,256	1,076	1,440	1,260	1,256	38,499	44,444	30.55	35.31	82,943	32.97
57	26	31	51	6	26	31	1,476	1,491	56.77	48.10	2,967	52.05
53	26	27	31	22	26	27	790	1,262	30.28	46.74	2,052	38.71
425	215	210	81	344	214	209	4,415	4,782	20.63	22.89	9,147	21.74
4,694	2,324	2,370	1,858	2,836	2,320	2,367	69,085	80,917	29.77	34.19	150,002	32.00
9	5	4	8	1	5	4	298	210	59.60	52.75	508	56.44
21	14	7	21	.....	14	7	790	312	56.43	44.57	1,102	52.48
42	14	28	40	2	14	28	877	1,556	62.64	55.58	2,433	57.93
17	8	9	15	2	7	9	382	415	54.57	46.11	797	49.81
64	35	29	59	5	35	29	1,863	1,615	53.23	55.69	3,478	54.03
56	28	28	52	4	27	28	1,212	1,361	44.89	48.61	2,573	46.78
27	9	18	25	2	9	18	478	901	53.11	50.05	1,379	51.07
102	41	61	49	53	41	61	1,858	2,193	45.32	35.96	4,051	39.71
338	154	184	269	69	152	184	7,758	8,563	51.04	46.54	16,321	48.52

TABLE I.—Continued.

General Summary of Births, Marriages and Deaths, in the State of Rhode Island, by Counties, during the year 1889.

DIVISIONS OF THE STATE.	BIRTHS, 1889.							MARRIAGES, 1889.				
	Whole Number.	SEX.		PARENTAGE.				Whole Number.	NATIVITY.			
		Males.	Females.	American.	Foreign.	Am. Father. For. Mother.	For. Father. Am. Mother.		American.	Foreign.	Am. Groom. For. Bride.	For. Groom. Am. Bride.
Bristol County.....	231	104	127	94	93	20	24	75	43	25	4	3
Kent County.....	606	333	273	205	304	48	49	224	89	83	22	30
Newport County.....	886	459	427	415	325	70	76	190	128	36	15	11
Providence County.....	6,073	3,075	2,998	2,017	2,847	582	627	2,367	1,132	754	226	255
Washington County.....	424	222	202	289	87	21	27	173	147	10	7	9
State Institutions.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
WHOLE STATE.....	8,220	4,193	4,027	3,020	3,656	741	803	3,029	1,539	908	274	308

TABLE I.—Continued.

General Summary of Births, Marriages and Deaths, in the State of Rhode Island, by Counties, during the year 1889.

DEATHS, 1889.

Whole Number.	SEX.		PARENTAGE.		Ages Given.		Aggregate Age in years.		Average Age in years.		Aggregate Age in years of all.	Average Age in years of all.
	Males.	Females.	American.	Foreign.	Males.	Females.	Males.	Females.	Males.	Females.		
208	106	102	108	100	105	102	3,978	3,855	37.89	37.79	7,833	37.84
457	213	244	246	211	209	244	5,609	7,940	26.84	32.54	13,549	29.89
442	221	221	289	153	221	221	9,157	9,966	41.43	45.09	19,123	43.26
4,694	2,324	2,370	1,858	2,836	2,320	2,367	69,085	80,917	29.77	34.19	150,002	32.00
338	154	184	260	60	152	184	7,758	8,563	51.54	46.54	16,321	48.52
120	75	45	36	84	74	45	3,627	1,813	49.01	40.29	5,440	45.71
6,259	3,093	3,166	2,806	3,453	3,081	3,163	99,214	113,054	32.20	35.74	212,268	33.99

TABLE II.—BIRTHS, 1889.

Arranged by Months, Sexes and Divisions of the State.

MONTHS.	SEX.	Whole State.	DIVISIONS OF THE STATE.								
			Bristol County.	Kent County.	Newport County Towns.	Newport City.	Providence County Towns.	Providence City.	Pawtucket.	Woonsocket.	Washington County.
January	Males. ...	343	8	20	11	49	59	133	27	25	11
	Females..	268	8	12	7	40	56	90	25	23	7
	Total....	611	16	32	18	89	115	223	52	48	18
February...	Males....	282	10	21	8	21	53	109	15	27	18
	Females .	269	10	6	8	18	61	98	22	27	19
	Total....	551	20	27	16	39	114	207	37	54	37
March	Males....	333	5	28	9	22	58	133	28	22	28
	Females .	369	10	27	6	35	70	155	18	25	23
	Total....	702	15	55	15	57	128	288	46	47	51
April	Males. ...	315	10	23	10	25	63	138	14	17	15
	Females .	340	9	23	4	26	76	125	37	21	19
	Total....	655	19	46	14	51	139	263	51	38	34
May.	Males....	312	8	28	5	18	70	112	23	29	19
	Females .	327	13	29	10	20	60	128	29	27	11
	Total....	639	21	57	15	38	130	240	52	56	30
June.....	Males....	371	6	26	7	37	74	152	31	19	19
	Females .	359	7	25	1	31	72	150	32	21	20
	Total....	730	13	51	8	68	146	302	63	40	39
July	Males....	381	9	30	6	40	75	150	29	26	16
	Females .	350	10	21	6	30	90	127	24	22	20
	Total....	731	19	51	12	70	165	279	53	48	36

TABLE II.—BIRTHS, 1889.—Continued.

MONTHS.	SEX.	Whole State.	DIVISIONS OF THE STATE.								
			Bristol County.	Kent County.	Newport County Towns.	Newport City.	Providence County Towns.	Providence City.	Pawtucket.	Woonsocket.	Washington County.
August	Males....	382	11	31	12	28	81	141	37	19	22
	Females..	375	15	30	9	31	88	133	31	20	18
	Total....	757	26	61	21	59	169	274	68	39	40
September..	Males....	339	9	29	4	26	70	126	31	22	22
	Females..	333	13	25	1	30	60	146	24	15	19
	Total....	672	22	54	5	56	130	272	55	37	41
October	Males....	376	9	30	12	26	90	128	35	21	13
	Females..	321	13	19	11	27	58	131	29	20	13
	Total....	697	22	49	23	53	148	269	64	41	28
November ..	Males....	388	11	37	10	35	85	135	29	29	17
	Females..	323	8	29	6	27	57	130	24	25	14
	Total....	711	19	66	16	62	142	265	53	54	34
December ..	Males....	371	8	30	6	32	85	131	31	28	20
	Females..	393	11	27	5	38	71	162	30	33	16
	Total....	764	19	57	11	70	156	293	61	61	36
Whole Year.	Males....	4,193	104	333	100	359	863	1,598	330	284	222
	Females..	4,027	127	273	74	353	819	1,575	325	279	202
	Total....	8,220	231	606	174	712	1,682	3,173	655	563	424

TABLE III.—PLURALITY BIRTHS, 1889.

ARRANGED BY MONTHS AND DIVISIONS OF THE STATE, AND SHOWING THE NATIVITY OF THE PARENTS.

MONTHS.	Number of Cases.	SEX.	Number of Children.	DIVISIONS OF THE STATE.						NATIVITY OF THE PARENTS.																						
				Bristol County.	Kent County.	Newport County.	Newport Towns.	Newport City.	Providence Co.*	Providence City.	Washington Co.	American.	English.	French.	German.	Italian.	Irish.	Scotch.	Swedish.	American Father.	Irish Father.	French Father.	Amer. Mother.	English Father.	Norwegian Father.	Scotch Mother.	English Mother.	Scotch Father.	Welsh Mother.			
January.....	6	Males..... 6 Females... 6	12	1	..	..	..	..	2	3	..	..	1	..	..	..	..	2	..	..	1	..	1	..	..	..	..	..	..	..	..
February.....	6	Males..... 7 Females... 5	12	1	..	..	..	..	3	2	..	1	1	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
March.....	8	Males..... 6 Females... 10	16	..	..	4	..	4	2	1	1	5	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
April.....	8	Males..... 9 Females... 7	16	..	..	1	1	4	2	..	..	3	1	1	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..
May.....	9	Males..... 13 Females... 5	18	2	1	1	1	4	..	..	..	3	1	1	..	2	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
June.....	6	Males..... 8 Females... 4	12	..	..	2	..	2	1	1	1	1	1	..	2	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1
July.....	11	Males..... 11 Females... 14	22	..	1	2	1	2	4	2	6	6	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
August.....	9	Males..... 11 Females... 7	18	1	..	1	..	1	3	3	1	4	..	1	1	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
September.....	9	Males..... 8 Females... 10	18	1	..	1	..	1	2	5	..	2	2	..	..	1	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
October.....	9	Males..... 8 Females... 10	18	2	..	..	..	..	2	5	..	4	1	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
November.....	7	Males..... 8 Females... 6	14	1	1	1	1	4	..	..	..	1	1	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
December.....	11	Males..... 13 Females... 9	22	..	..	2	..	4	5	..	..	2	..	2	..	3	1	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..
Whole Year....	99	Males..... 105 Females... 93	198	2	7	3	15	28	39	5	32	10	10	1	3	16	3	1	..	2	1	6	1	1	1	1	1	1	1	1	1	1

* Not including Providence city.

TABLE IV.—MARRIAGES, 1889.

Arranged by Months and Divisions of the State.

MONTHS.	Whole State, 1889.	DIVISIONS OF THE STATE.							Whole State, 1888.
		Bristol County.	Kent County.	Newport County Towns.	Newport City.	Providence County Towns.*	Providence City.	Washington County.	
January.....	261	9	26	4	14	83	119	6	270
February.....	220	4	15	2	13	72	101	13	245
March.....	194	2	14	4	11	65	81	17	100
First Quarter...	675	15	55	10	38	220	301	36	615
April.....	243	7	16	4	9	77	118	12	302
May.....	230	5	25	4	6	72	105	13	222
June.....	290	6	16	3	14	100	140	11	294
Second Quarter..	763	18	57	11	29	249	363	36	818
July.	203	4	12	4	7	80	90	6	224
August.....	240	5	23	2	4	86	106	14	244
September.....	271	7	19	8	16	97	105	19	273
Third Quarter.—	714	16	54	14	27	263	301	39	741
October....	331	13	24	9	16	96	147	26	305
November.....	345	6	23	10	22	109	160	15	357
December.....	201	7	11	1	3	63	95	21	186
Fourth Quarter..	877	26	58	20	41	268	402	62	848
Whole Year.....	3,029	75	224	55	135	1,000	1,367	173	3,022

* Include Pawtucket and Woonsocket.

TABLE V.—DEATHS, 1889.

Arranged by Months, Sexes and Divisions of the State.

MONTHS.	SEX.		DIVISIONS OF THE STATE.									State Institutions.
			Whole State.	Bristol County.	Kent County.	Newport County Towns.	Newport City.	Providence County Towns.	Pawtucket.	Providence City.	Woonsocket.	Washington County.
January...	Males..	229	8	12	3	8	42	17	109	10	14	6
	Females	257	9	14	7	15	45	21	104	15	21	6
	Total ..	486	17	26	10	23	87	38	213	25	35	12
February..	Males..	239	8	15	7	14	46	18	86	19	18	8
	Females	291	9	21	3	8	54	26	129	18	18	5
	Total ..	530	17	36	10	22	100	44	215	37	36	13
March ...	Males..	279	8	17	6	19	54	22	109	20	13	11
	Females	268	8	24	5	19	54	34	105	9	9	1
	Total ..	547	16	41	11	38	108	56	214	29	22	12
April.....	Males..	250	9	14	5	17	50	15	105	12	16	7
	Females	245	7	13	3	11	56	22	95	13	20	5
	Total ..	495	16	27	8	28	106	37	200	25	36	12
May	Males..	234	9	18	5	17	40	9	105	14	9	8
	Females	236	6	19	2	11	49	13	99	15	19	3
	Total ..	470	15	37	7	28	89	22	204	29	28	11
June.....	Males..	232	9	14	6	8	52	20	96	11	12	4
	Females	229	7	13	3	18	47	19	84	25	11	2
	Total ..	461	16	27	9	26	99	39	180	36	23	6
July.....	Males..	344	12	17	9	10	67	23	150	39	16	1
	Females	301	10	24	4	9	49	33	130	26	14	2
	Total ..	645	22	41	13	19	116	56	280	65	30	3

TABLE V.—DEATHS, 1889.—Continued.

MONTHS.	SEX.		DIVISIONS OF THE STATE.									State Institutions.
			Whole State.	Bristol County.	Kent County.	Newport County Towns.	Newport City.	Providence County Towns.	Pawtucket.	Providence City.	Woonsocket.	Washington County.
August ...	Males ..	339	14	40	9	17	71	31	110	28	11	8
	Females	328	9	32	4	21	69	23	120	25	21	4
	Total ..	667	23	72	13	38	140	54	230	53	32	12
September.	Males ..	278	7	25	6	17	67	19	106	15	12	4
	Females	280	15	29	6	18	51	23	103	22	10	3
	Total ..	558	22	54	12	35	118	42	209	37	22	7
October ...	Males ..	212	8	16	..	9	44	20	78	22	11	4
	Females	272	9	20	5	12	55	26	107	19	16	3
	Total ..	484	17	36	5	21	99	46	185	41	27	7
November.	Males ..	226	7	13	4	9	43	22	99	12	9	8
	Females	220	7	18	5	15	44	17	79	12	17	6
	Total ..	446	14	31	9	24	87	39	178	24	26	14
December..	Males ..	231	7	12	3	13	34	23	107	13	13	6
	Females	239	6	17	9	8	46	28	101	11	8	5
	Total ..	470	13	29	12	21	80	51	208	24	21	11
Whole Year	Males ..	3,093	106	213	63	158	610	239	1,260	215	154	75
	Females	3,166	102	244	56	165	619	285	1,256	210	184	45
	Total ..	6,259	208	457	119	323	1,229	524	2,516	425	338	120

TABLE VI.—DEATHS, 1889.

Exhibiting the Whole Number, the Proportion to Population, the Number of each Sex, and the Number in each Period of Life, in each Town and Division of the State.

TOWNS AND DIVISIONS OF THE STATE.	Population, 1889.*	DEATHS.				Under 1 year.	1 to 2.
		Total.	Per 1000 of population.	SEX.	Number of each Sex.		
Barrington	1,400	21	15.0	Males.....	8	3	....
				Females...	13	2	....
Bristol	6,000	86	14.3	Males.....	44	5	1
				Females...	42	2	1
Warren	4,400	101	22.1	Males.....	54	16	5
				Females...	47	10	2
BRISTOL COUNTY..	11,800	208	17.6	Males.....	106	24	6
				Females...	102	14	3
Coventry	5,000	100	20.0	Males.....	48	10	9
				Females...	52	13	4
East Greenwich...	2,800	58	20.8	Males.....	21	7	2
				Females...	37	6	1
West Greenwich...	850	18	21.2	Males.....	6	...	2
				Females...	12	1	....
Warwick	14,100	281	19.9	Males.....	138	38	11
				Females...	143	34	10
KENT COUNTY....	22,750	457	20.1	Males.....	213	55	24
				Females...	244	54	15
Jamestown	520	4	7.7	Males.....	1	....	....
				Females...	3	1	....
Little Compton...	1,050	8	7.6	Males.....	5	....	....
				Females...	3	....	....
Middletown	1,205	17	14.1	Males.....	6	....	....
				Females...	11	2	1
NEWPORT CITY...	21,266	323	15.2	Males.....	158	29	8
				Females...	165	24	9
New Shoreham...	1,312	20	15.2	Males.....	7	1	1
				Females...	13	1	....
Portsmouth	2,000	20	10.0	Males.....	12	2	....
				Females...	8	....	....
Tiverton	2,800	50	17.9	Males.....	32	6	2
				Females...	18	4	1
NEWPORT COUNTY	30,153	442	14.7	Males.	221	38	11
				Females...	221	32	11
Burrillville	5,400	99	18.3	Males.....	53	16	1
				Females...	46	13	3
Cranston†	5,200	103	19.8	Males.....	49	4	1
				Females...	54	7	2
Cumberland	7,350	141	19.2	Males.....	72	27	6
				Females...	69	13	5

*By town estimation.

†Not including State Institutions.

TABLE VI.—DEATHS, 1889.—Continued.

2 to 3.	3 to 5.	6 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.	Age not stated.
...	...	1	...	...	...	1	1	1	1	...	...	...	...
...	1	...	1	2	...	3	1	1	...	1	1	...	...
1	...	1	...	...	4	3	6	8	8	3	3	...	1
1	1	...	2	3	4	3	4	7	6	3	4	1	...
...	...	1	...	4	2	1	2	3	6	6	7	1	...
2	3	2	1	2	2	3	5	1	5	6	3	...	...
1	...	3	...	4	6	5	9	12	15	9	10	1	1
3	5	2	4	7	6	9	10	9	11	10	8	1	...
1	3	1	1	1	1	2	1	5	6	3	3	1	...
1	1	3	1	4	4	3	2	5	2	5	4	...	...
1	...	1	...	1	...	...	1	3	1	2	1	1	...
2	...	2	1	3	1	1	...	4	5	2	6	3	...
...	...	...	...	...	1	...	...	...	1	2	...	...	...
...	...	1	...	2	1	...	...	...	1	2	3	1	...
3	5	5	6	7	15	8	5	8	6	13	3	1	4
5	6	4	5	3	16	11	14	7	6	13	7	2	...
5	8	7	7	9	17	10	7	16	14	20	7	3	4
8	7	10	7	12	22	15	16	16	14	22	20	6	...
...	...	...	...	...	...	...	1	...	...	...	...	...	...
...	...	1	...	...	...	...	...	...	1	...	...	...	...
...	...	...	...	...	...	...	...	2	1	1	1	...	...
...	...	...	...	...	...	...	...	...	...	2	...	1	...
...	...	...	...	...	...	...	...	...	3	1	2	...	...
...	...	...	...	...	1	1	...	2	1	2	1	...	...
1	5	2	...	12	9	13	11	13	19	20	16	...	...
2	3	9	2	5	5	11	14	10	24	27	18	2	...
...	...	1	...	...	1	...	...	...	1	2	...	...	...
...	...	...	...	...	...	3	1	1	1	1	4	1	...
...	...	...	...	...	3	...	...	...	1	3	3	...	...
...	...	1	...	...	...	1	...	1	1	2	2	...	...
1	5	...	...	...	2	...	5	1	3	6	1	...	...
...	...	...	1	...	1	1	1	1	2	5	1	...	...
2	10	3	...	12	15	13	17	16	28	33	23	...	...
2	3	11	3	5	7	17	16	15	30	39	26	4	...
...	3	3	...	1	5	3	4	4	5	6	2	...	...
...	1	3	1	1	1	...	4	4	4	5	4	2	...
1	2	2	...	5	6	4	1	8	7	6	1	1	...
2	...	1	...	5	5	4	4	4	7	6	6	1	...
1	2	2	...	1	5	5	4	7	7	3	2	...	...
2	3	3	...	3	12	5	2	3	5	8	5	...	...

TABLE VI.—DEATHS, 1889.—Continued.

TOWNS AND DIVISIONS OF THE STATE.	Population, 1889.*	DEATHS.				Under 1 year.	1 to 2.
		Total.	Per 1000 of population.	SEX.	Number of each Sex.		
East Providence...	7,900	130	16.5	Males.....	60	11	1
				Females...	70	16	5
Foster.....	1,350	25	18.5	Males.....	17	1	....
				Females...	8	1	...
Glocester.....	2,100	41	19.5	Males.....	18	2	2
				Females...	23	6	1
Johnston.....	8,750	132	15.1	Males.....	68	26	3
				Females...	64	13	3
Lincoln.....	21,500	355	16.5	Males. . .	173	66	15
				Females...	182	53	11
North Providence..	1,550	31	20.0	Males.....	17	3	3
				Females...	14	4	....
North Smithfield..	3,160	62	19.6	Males.....	31	2	1
				Females...	31	5	1
PAWTUCKET.....	25,500	524	20.5	Males.....	239	59	13
				Females...	285	52	14
PROVIDENCE CITY.	127,500	2,516	19.7	Males.....	1,260	281	87
				Females...	1,256	222	73
Scituate.....	3,600	57	15.8	Males.....	26	2	1
				Females...	31	3	....
Smithfield.....	2,500	53	21.2	Males.....	26	8	2
				Females...	27	2	....
WOONSOCKET.....	21,500	425	19.8	Males.....	215	78	10
				Females...	210	65	19
PROVIDENCE Co...	244,860	4,694	19.2	Males.....	2,324	586	146
				Females...	2,370	475	137
Charlestown.....	1,050	9	8.6	Males.....	5	....	....
				Females...	4	1	...
Exeter.....	1,050	21	20.0	Males.....	14	1	1
				Females...	7	1	1
Hopkinton.....	2,767	42	15.2	Males.....	14	1	....
				Females...	28	1	1
Narragansett.....	1,200	17	14.2	Males.....	8	1	....
				Females...	9	1	1
North Kingstown.	3,870	64	16.5	Males.....	35	5	1
				Females...	29	2	....
South Kingstown..	4,620	56	12.1	Males.....	28	3	1
				Females...	28	2	1
Richmond.....	1,800	27	15.0	Males.....	9	1	....
				Females...	18	1	1
Westerly.....	6,825	102	14.9	Males.....	41	4	2
				Females...	61	10	4
WASHINGTON Co..	23,182	338	14.6	Males. . .	154	16	5
				Females...	184	19	9
State Institutions..	1,400	120	85.7	Males.....	75	3	2
				Females...	45	4	2

*By town estimation.

TABLE VI.—DEATHS, 1889.—Continued.

2 to 3.	3 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.	Age not stated.
2	1	1	...	1	5	3	7	7	10	5	4	1	1
...	1	1	2	2	6	8	8	5	7	5	4	...	...
2	...	...	...	...	1	...	2	1	3	4	2	1	...
...	...	1	...	...	...	...	...	...	3	2	1	...	...
...	...	...	...	...	1	...	1	1	1	6	3	1	...
3	1	...	...	...	4	...	3	...	1	3	...	1	...
2	4	2	1	2	4	3	9	6	...	4	1	1	...
4	2	3	...	3	8	6	7	3	5	4	3	...	...
7	5	9	2	8	6	11	10	8	11	11	4	...	...
6	5	4	3	5	21	10	12	19	17	11	5	...	...
...	1	...	...	...	1	...	3	...	1	2	3	...	...
1	...	1	...	...	1	...	2	1	2	1	1	...	...
2	1	3	2	3	2	1	1	1	5	7	...	...	...
...	...	2	2	4	2	1	2	2	1	7	2	...	...
11	3	8	4	7	25	18	16	19	13	29	10	2	2
4	12	5	3	9	21	24	14	30	33	34	17	11	2
37	47	32	16	39	119	121	99	121	130	88	40	3	...
27	33	52	25	42	95	104	127	106	139	123	66	22	...
...	...	...	...	...	...	4	1	2	4	8	4	...	...
...	1	2	1	...	4	2	...	2	6	3	7	...	...
2	...	1	1	...	...	1	1	3	2	4	1	...	...
...	2	1	1	...	...	3	3	2	1	2	7	3	...
12	7	10	...	9	20	16	15	12	10	9	6	...	1
3	9	7	3	11	22	14	17	9	10	13	6	1	1
79	76	73	26	76	200	190	174	200	209	192	83	10	4
52	70	86	41	85	205	181	204	189	242	232	130	38	3
...	...	...	...	...	1	...	...	1	1	1	1	...	...
...	...	...	...	...	...	...	...	...	1	2	...	...	...
...	...	...	...	...	2	...	...	1	2	4	3	...	...
...	...	...	...	...	1	...	...	...	2	2	...	...	...
...	...	...	...	...	1	...	...	3	2	3	4	...	...
...	...	...	...	1	2	4	2	6	3	2	6	1	...
...	...	...	...	1	...	...	...	...	2	2	1	...	1
...	...	1	...	...	...	...	...	1	3	1	1	...	...
...	...	1	...	...	2	2	2	2	1	13	6	...	...
...	...	...	1	...	4	2	1	2	4	7	6	...	...
...	...	1	...	1	3	3	1	2	5	6	1	...	1
1	...	...	...	3	3	...	1	6	3	4	2	2	...
...	1	...	...	...	...	...	1	1	2	...	3	...	...
...	...	2	...	1	...	2	2	...	1	5	3	...	...
2	1	2	...	...	2	5	3	5	3	7	4	1	...
...	2	2	2	6	5	6	2	4	5	6	7	...	...
2	2	4	...	2	11	10	7	15	18	36	23	1	2
1	2	5	3	11	15	13	8	19	22	29	25	3	...
...	...	...	...	2	6	6	17	13	11	9	5	...	1
...	...	...	...	...	13	4	7	4	4	6	1	...	...

TABLE VI. Continued.—DEATHS, 1889.—RECAPITULATION.

DIVISIONS OF THE STATE.	Population, 1889.*	DEATHS.				Under 1 year.	1 to 2.
		Total.	Per 1000 of Pop- ulation.	SEX.	Number of each Sex.		
BRISTOL COUNTY..	11,800	208	17.6	Males.....	106	24	6
				Females...	102	14	3
KENT COUNTY....	22,750	457	20.1	Males.....	213	55	24
				Females...	244	54	15
NEWPORT COUNTY.	30,153	442	14.7	Males.....	221	38	11
				Females...	221	32	11
PROVIDENCE Co...	244,860	4,694	19.2	Males.....	2,324	586	146
				Females...	2,370	475	137
WASHINGTON Co..	23,182	338	14.6	Males.....	154	16	5
				Females...	184	19	9
STATE INST'NS....	1,400	120	85.7	Males.....	75	3	2
				Females...	45	4	2
WHOLE STATE....	† 330,000	6,259	19.0	Males.....	3,993	722	194
				Females...	3,166	598	177

*By town estimation.

†Estimation of State Registrar.

TABLE VI. Continued.—DEATHS, 1889.—RECAPITULATION.

2 to 3.	3 to 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 and over.	Age not stated.
1	...	3	...	4	6	5	9	12	15	9	10	1	1
3	5	2	4	7	6	9	10	9	11	10	8	1	....
5	8	7	7	9	17	10	7	16	14	20	7	3	4
8	7	10	7	12	22	15	16	16	14	22	20	6	....
2	10	3	...	12	15	13	17	16	28	33	23	....	...
2	3	11	3	5	7	17	16	15	30	39	26	4	....
79	76	73	26	76	200	190	174	200	209	192	83	10	4
52	70	86	41	85	205	181	204	189	242	232	130	38	3
2	2	4	...	2	11	10	7	15	18	36	23	1	2
1	2	5	3	11	15	13	8	19	22	29	25	3	...
....	....	....	....	2	6	6	17	13	11	9	5	....	1
....	....	....	....	....	13	4	7	4	4	6	1	....	....
89	96	90	33	105	255	234	231	272	295	299	151	15	12
66	87	114	58	120	268	239	261	252	323	338	210	52	3

TABLE VII.—CAUSES OF DEATH, 1889.

Arranged Alphabetically; showing the Number of each Sex, who died from each cause, in each month and in the whole year 1889, also the Number of American and of Foreign Parentage, from each cause, for the year.

CAUSES OF DEATH.																									PARENTAGE.				SEX.			
Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		Am.	For.	M.	F.	Total.				
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.				
3	1	1	..	..	..	..	2	..	2	..	4	1	1	1	4	..	2	..	1	2	10	16	21	5	26			
1	1	1	..	1	..	..	..	..	..	..	..	..	..	..	1	1	1	1	3	4	3	4	7				
2	1	4	2	1	..	..	1	3	..	1	3	..	2	..	1	..	..	2	..	..	..	1	1	7	13	9	11	20
2	..	1	..	4	1	5	1	1	..	8	..	8	..	11	2	..	..	..	..	6	..	2	..	18	34	48	4	52
..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1				
..	1	1	..	..	1	..	1	1				
1	1	3	1	1	..	3	..	1	2	2	3	3	..	3	..	2	4	2	1	..	..	..	..	14	17	15	16	31
1	1	..	2	2	..	..	2	1	1	1	3	1	2	..	1	2	1	2	1	2	11	14	15	10	25			
..	1	..	1	..	1				
..	2	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	..	1				
..	1	..	..	..	..	..	1	..	..	..	1	1	2	..	2				
..	1	1	2	..	2				
1	1	..	1	..	..	1	..	..	..	..	..	..	..	1	1	..	1	..	1	1				
1	1	1	..	..	1	..	..	..	..	..	..	..	1	1	..	3	2	3	5				
2	1	1	1	..	..	4	1	..	4	1	2	..	1	..	1	1	2	..	3	1	3	..	7	16	19	4	23			
..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	1
..	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	1	1	1	1				
2	..	1	..	1	..	2	1	1	1	1	1	1	..	1	..	2	1	1	1	1	1	..	..	9	6	4	11	15		
..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	2	..	..	2	2				
..	1	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	2	1	3	..	3				
..	1	..	..	..	..	..	..	1	..	1	1	..	1	1				
1	1	..	1	1				

TABLE VII.—CAUSES OF DEATH, 1889.—Continued.

CAUSES OF DEATH.	Jan.												Feb.												Mar.												April.												May.												June.												July.												Aug.												Sept.												Oct.												Nov.												Dec.												PARENTAGE.				SEX.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	M.						F.						M.						F.						M.						F.						M.						F.						M.						F.						M.						F.						M.						F.						Am.		For.		M.		F.		Total.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.

CAUSES OF DEATH.		Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		PARENTAGE.			SFX.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
		M. F.		M. F.		M. F.		M. F.		M. F.		M. F.		M. F.		M. F.		M. F.		M. F.		M. F.		M. F.		M. F.		Am.		For.		M.		F.		Total.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

TABLE VII.—CAUSES OF DEATH, 1889.—Continued.

CAUSES OF DEATH.	Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		PARENTAGE.		SEX.			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Am.	For.	M.	F.	Total.	
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Convulsions, Uræmic.....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	3	..	3
Group	3	3	8	4	8	6	1	3	3	3	5	3	1	3	1	2	3	4	1	7	5	3	24	56	37	43	80
Cyanosis.....	..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	1	1	1	1	1	..	..	..	..	4	4	4	4	8
Cystitis.....	2	..	..	..	..	..	3	2	..	..	..	..	..	..	1	1	4	1	1	1	..	..	2	1	11	7	14	4	18
Debility.....	..	1	2	1	1	3	1	2	..	1	1	1	1	1	1	1	..	2	2	1	1	..	..	2	5	5	11	16	27
Infantile.....	3	5	6	4	3	1	2	3	4	3	3	1	8	9	5	2	7	4	1	2	1	4	2	5	22	66	45	43	88	
Premature Birth.....	2	4	2	1	8	2	5	3	9	4	3	3	13	3	2	4	..	1	2	3	5	2	3	4	43	41	50	34	84	
Senile.....	1	1	2	4	1	2	..	2	..	3	1	1	2	1	1	2	1	3	..	3	2	..	1	1	18	17	12	23	35	
Delirium Tremens.....	..	..	..	..	..	..	2	..	1	1	..	..	1	..	..	..	1	..	..	..	..	..	..	1	5	5	1	6	6
Diabetes.....	1	2	1	2	..	..	..	1	..	1	..	..	..	..	2	2	..	3	1	1	..	5	1	2	17	10	15	12	27
Mellitus.....	1	1	1	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	4	3	2	5
Diarrhœa, Acute.....	1	1	1	1	1	1	..	..	1	1	2	1	18	12	8	15	4	3	2	4	1	..	..	..	30	48	39	39	78
Chronic.....	..	1	2	..	..	..	1	..	1	..	1	..	2	..	..	..	1	..	1	..	..	..	..	..	4	6	5	5	10
Diphtheria.....	8	11	7	8	8	13	4	12	11	7	1	5	8	4	2	5	9	10	9	7	6	11	7	11	89	95	80	104	184	
Dropsy.....	1	4	2	2	1	4	4	1	..	1	1	1	..	2	..	2	1	4	2	2	..	2	3	3	17	25	14	28	42	
Dysentery.....	2	1	1	..	..	..	..	..	1	1	2	1	4	4	11	13	6	11	1	5	3	..	1	1	32	36	29	39	68
Chronic.....	1	1	..	1	1	1
Typhoid.....	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	1	1	..	2	2
Embolism.....	..	..	2	..	1	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	1	..	..	..	3	2	1	4	5
Empyema.....	1	..	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	2	2
Empysemata.....	1	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2	1	2	3	3
Encephalitis.....	..	..	..	..	..	..	1	..	1	..	..	1	..	..	..	..	..	..	..	..	1	..	1	1	1	4	4	1	5
Enteritis.....	2	1	1	4	2	1	1	1	1	1	1	3	3	3	4	8	1	6	2	2	3	5	1	2	35	24	22	37	59	
Gastro.....	1	1	1	1	..	..	3	..	2	2	1	..	3	2	3	5	3	..	1	1	1	1	2	..	12	20	20	12	32

CAUSES OF DEATH.	Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		PARENTAGE.		SEX.			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Am.	For.	M.	F.	Total.	
Enterocolitis.....	1	..	..	..	..	..	..	..	..	..	2	2	3	2	4	..	..	..	..	..	1	1	..	2	9	13	5	18	
Epilepsy.....	1	1	1	1	1	1	1	1	2	1	..	1	4	1	..	..	..	..	..	..	..	3	..	..	13	6	8	11	19
Erysipelas.....	..	2	2	1	1	2	1	1	..	2	1	..	..	..	..	..	..	1	1	1	1	3	2	..	11	10	9	12	21
Exhaustion.....	1	2	2	3	3	3	2	5	3	5	6	1	2	5	2	4	2	1	1	..	2	2	4	..	19	42	28	33	61	
Fever, unspecified.	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	1	2	1	..	1	..	2	6	5	3	8	
Continued.....	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1
Gastric.....	1	..	..	..	..	1	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	4	..	4
Intermittent.....	..	1	2	..	1	1	..	1	1	1	1	1	1	1	2	..	2	1	..	..	..	..	..	..	..	13	6	7	13
Malarial.....	..	1	..	1	1	1	2	..	1	1	1	2	3	4	1	1	3	4	1	1	..	..	..	6	15	6	15	21	
Typho.....	..	..	..	..	..	1	..	1	..	..	..	..	..	..	1	..	1	1	..	..	..	1	..	1	1	3	2	2	4
Remittent.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..	..	1	1	..	2	2
Typhoid.....	5	3	8	7	1	2	6	4	1	1	4	1	4	4	13	3	10	7	9	11	13	7	5	5	54	80	79	55	134	
Fistula.....	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	1	1	1
Gall Stones.....	..	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	1	1	1	2
Gangrene.....	..	..	..	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	1	1	1	2
of Foot.....	..	..	..	2	2	1	..	1	1	1	1	1	1	1	..	..	..	..	..	..	..	1	..	2	2	5	5	2	7
of Leg.....	..	..	1	..	1	..	1	..	1	..	..	..	..	..	..	1	..	1	..	1	..	..	1	1	1	3	1	3	4
Senile.....	1	2	1	1	1	..	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	1	2	7	3	5	5	10	10
Gastralgia.....	1	1	1	1	1	1	1	1	1	2	2	1	3
Gastritis, acute.....	2	3	..	2	1	..	3	3	2	5	..	..	2	4	1	1	2	2	1	1	2	2	1	1	14	23	17	20	37
Chronic.....	..	..	..	1	1	..	1	..	1	..	..	..	..	..	..	..	..	1	1	1	1	1	..	2	2	..	4	4	4
Glaucoma.....	1	1	1	1	..	1	1	1	1
Goitre.....	1	1	1	1	1	..	1	1	1	1
Gout.....	1	1	1	2	1	1	2	2
Heart Diseases.....	20	13	11	15	11	11	9	12	15	18	14	6	7	6	13	11	13	12	19	19	9	14	11	11	178	122	152	148	300	
Dilatation.....	1	1	..	2	..	1	1	1	1	2	..	6	2	1	1	1	8

TABLE VII.—CAUSES OF DEATH, 1889.—Continued.

CAUSES OF DEATH.	PARENTAGE.												SEX.	
	Am.						For.						M.	F.
	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.		Total.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Heart, Fatty Degeneration....	1	2	1	1	1	1	1	1	1	1	1	2	9	18
Hypertrophy.....	2	1	1	1	1	1	1	1	1	1	1	1	8	11
Inflammation.....	1	1	1	1	1	1	1	1	1	1	1	1	10	20
Valvular Disease.....	3	4	3	2	4	1	3	2	4	5	3	4	34	71
Hæmatemesis.....							1						1	2
Hæmaturia.....													1	1
Hæmoptysis.....		1		1									2	2
Hemiplegia.....	1		1	1				1	1			1	2	7
Hemorrhage, unspecified.....	1	2		1	2	2	1	2	1	1	3		10	17
from Bowels.....				1	2					1			1	4
from Lungs.....					1						2		3	4
from Umbilicus.....				1	1								1	2
Hepatitis.....					1		1			2			1	4
Hernia.....		2			1	1	1		1	1	1	1	5	8
Umbilical.....								1		1			1	2
Hip Disease.....			1										1	1
Homicide.....		1			1				1				3	3
Hydrocephalus.....		1		1	1	1	3		1	1	1	1	9	13
Hydrophobia.....													1	2
Hydrothorax.....		1		1									2	4
Icterus Neonatorum.....													1	2
Inanition.....	4	2	1	2	2		1	1	3	1	2	1	13	30
Indigestion.....													2	3
Inflammation.....							1						1	1

TABLE VII.—CAUSES OF DEATH, 1889.—Continued.

CAUSES OF DEATH.	Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		PARENTAGE.			SEX.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Am.	For.	M.	F.	Total.	
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malnutrition.....																									3	13	6	10	16	
Marasmus.....	3	1	4	2	1		2		1		2		4		3		5		7		1		1	1	41	35	46	30	76	
Senile..			1	1		1		1		1														3	3	1	5	6		
Measles.....																														
Meningitis..	4	1	1	5	3	3	5	4	2	3	8	2	3	2	4	3	3		1		1	2	2	5	10	19	15	14	29	
Cerebro-Spinal																									35	54	43	46	89	
Spinal..																								3	6	6	3	9		
Tubercular..	6	2	4	2			2	2		1	2	1	1	2	3	1	4	2		1	2	2	1	20	25	27	18	45		
Myelitis.....	1																						1	6	1	2	5	7		
Necrosis of Femur.																														
of Spine.....																														
Nephritis.....	1	1	3	2	1		1	1	2	2	2	2	2	1	2		1	3		2	2	1	2	11	21	16	16	32		
Nervous Prostration																								2						
Neuralgia.....																								1	1					
Neurasthenia																								1						
Noma.....																								1						
Obstipation.....	1																							2	1	3			3	
Edema Glottidis																														
Esophagus, Stricture of																														
Old Age.....	9	10	4	15	8	15	5	11	2	14	6	13	2	16	6	12	7	14	9	16	8	7	9	136	91	75	152	227		
Opium Habit.....																								2						
Ovaritis.....																								1						
Paralysis.....																								1						
Paraplegia.....	6	4	6	5	2	4	5	4	4	7	4	7	1	7	3	2	7	2	3	7		3	3	4	71	29	44	56	100	
																								2					2	

CAUSES OF DEATH.

CAUSES OF DEATH.																													
•																													
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Am.	For.	M.	F.	Total.
Paresis.....	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	...	1	1	
Parotitis.....	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	...	2	2	
Pericarditis.....	..	1	..	2	..	..	1	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1	8	...	6	9
Periostitis.....	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	...	1	1	...	1
Peritonitis, Acute.....	1	8	1	4	1	6	2	1	2	..	4	4	3	..	4	2	4	2	2	2	3	1	2	26	37	22	41	63	
Tubercular.....	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	...	1	1	1
Pertyphilitis.....	1	..	..	..	..	..	1	1	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	3	2	4	1	5
Phlebitis.....	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1	1	1	1	2
Phrenitis.....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	1	1	...	1
Pleurisy.....	1	1	..	2	3	2	..	..	1	1	..	1	..	2	..	2	..	2	1	..	3	..	4	15	14	5	19	
Pneumonia.....	30	25	29	40	51	41	40	29	24	12	9	15	7	7	15	9	7	5	13	14	11	11	19	20	213	270	255	228	483
Pott's Disease.....	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2	...	2
Progressive Muscular Atrophy.....	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1	1	2
Prostate Disease.....	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	...	1	...	1
Purpura Hemorrhagica.....	..	..	1	1	1	..	..	1	..	..	1	..	1	..	1	..	..	..	..	..	1	..	..	1	5	3	3	6
Scorvy.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	1	1	...	1
Pyæmia.....	1	1	1	1	..	1	..	2	1	..	1	1	1	1	6	4	3	7
Rachitis.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	...	1	...	1
Rheumatism.....	1	1	1	..	1	..	1	..	1	..	1	..	1	..	1	7	1	1	3	5	8
Acute.....	3	1	3	1	3	1	2	1	1	1	1	2	1	1	1	1	1	1	1	1	2	1	1	9	11	10	10	20	
Chronic.....	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	2	...	2	...	2
Salpingitis.....	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	1	...	1	1
Scarlatina.....	1	5	3	1	3	6	7	3	3	2	3	2	2	..	2	1	1	1	1	1	1	..	1	14	36	24	27	51	
Scrofula.....	..	..	1	1	..	..	..	..	..	..	..	..	..	..	3	1	1	..	..	..	..	..	..	4	4	3	5	8
Septicæmia.....	..	..	..	..	..	..	1	1	..	2	2	..	1	..	1	..	..	..	..	..	..	..	1	6	2	3	5	8
Shock.....	..	2	1	..	1	..	1	..	..	..	1	..	1	..	..	1	..	1	..	1	..	..	..	4	3	4	3	7

TABLE VII.—CAUSES OF DEATH, 1889.—Continued.

CAUSES OF DEATH.	Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		PARENTAGE.		SEX.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Am.	For.	M.	F.	Total.
Skin Diseases.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	....	...	1	1
Eczema.....	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	....	1	...	1	1
Pemphigus.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	....	...	1	1
Spinal Diseases.....	1	—	—	—	2	1	1	1	—	—	—	—	1	—	1	1	1	—	—	—	—	—	—	—	8	6	...	8	14
Stomach Diseases.....	—	1	1	—	—	1	—	—	3	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	5	7	...	7	12
Inflammation.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	....	1	...	1	1
Ulceration.....	2	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	2	...	2	5
Suicide, unspecified.....	—	1	—	—	1	—	—	—	1	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	3	2	...	4	1
Corrosive Sublimate.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	....	...	1	1
Drowning.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	....	3	...	3	3
Hanging.....	1	—	—	—	1	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	7	...	6	8
Coal Gas.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	....	1	...	1
Paris Green.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	....	1	...	1
Shooting.....	1	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	...	4	4
Suffocation.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	....	....	1	...	1	1
Syncope.....	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	...	2	2
Syphilis.....	—	—	—	—	—	1	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	4	1	...	3	5
Congenital.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	5	...	3	8
Tabes Dorsalis.....	2	1	—	—	—	—	—	—	1	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	1	....	1	...	1
Mesenterica.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	3	...	5	9
Teething.....	3	1	2	1	1	2	1	2	1	2	1	—	2	5	3	3	2	1	—	—	—	—	—	—	15	29	...	25	44
Tetanus.....	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	3	2	...	4	1
Throat Disease.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	....	1	...	1
Thrombosis.....	—	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	1	...	2	1

CAUSES OF DEATH.	Under 1.		1 and under 2.		2 to 3.		3 to 5.		5 to 10.		10 to 15.		15 to 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 to 90.		90 and over.		Age not stated.		SEX.			
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.	
Cancer of Throat.																																				
Tibia.																																				
Tongue.																																				
Uterus.																																				
Vagina.																																				
Vulva.																																				
Cancerum Oris.	1																																			
Catarrh.																																				
Cellulitis.																																				
Pelvic.																																				
Cephalitis.																																				
Cerebritis.	1																																			
Childbirth.																																				
Phlegmasia Dolens.																																				
Puerperal Convul.																																				
Fever.																																				
Hemorrhage.																																				
Mania.																																				
Septicæmia.																																				
Cholera Infantum.	166	151	35	30	5	4	2	2																												
Morbus.																																				
Chorea.																																				
Cold.	1																																			
Colic.																																				
Consumption.	6	4	3	2		3	2	1	1	6	1	8	38	57	115	112	85	71	42	44	28	17	17	22	11	14		9								
Convulsions.	43	37	14	13	4	6	4	3	3																											

TABLE VIII.—CAUSES OF DEATH, 1889.—Continued.

CAUSES OF DEATH.																																					
Under 1.		1 and under 2.		2 to 3.		3 to 5.		5 to 10.		10 to 15.		15 to 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 to 90.		90 and over.		Age not stated.		SEX.					
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total.			
Convulsions, Uremic.																																					
7	4	16	8	6	8	8	13	9	1																									3	3		
Croup																																					
4	4																																	37	43	80	
Cyanosis																																					
																																		4	4	8	
Cystitis																																					
																																		14	4	18	
Debility																																					
																																		11	16	27	
Infantile																																					
40	39	1	3	4	1																													45	43	88	
Premature Birth																																					
50	34																																	50	34	84	
Senile																																					
																																		12	23	35	
Delirium Tremens																																					
																																		5	1	6	
Diabetes																																					
				1																														15	12	27	
Mellitus																																					
																																		3	2	5	
Diarrhoea, Acute																																					
25	25	2	3	1																														39	39	78	
Chronic																																					
1	1																																	5	5	10	
Diphtheria																																					
3	10	8	14	17	11	23	23	21	32	5	10	1	2																					80	104	184	
Dropsy																																					
																																			14	28	42
Dysentery																																					
10	6	3	5		1	2	1	2		1	2		2	2		1	4	3	2	4	9	1	3		3		1						29	39	68		
Chronic																																					
																																			1	1	1
Typhoid																																					
																																			2	2	2
Embolism																																					
																																			1	4	5
Empyema																																					
1																																		2	..	2	2
Empysema																																					
																																		1	2	3	3
Encephalitis																																					
																																		4	1	5	
Enteritis																																					
9	14	2	3	2	2	1	1	2		2	2		1	2	2		1	1	..	2	2		5		1		1						22	37	59		
Gastro																																					
9	2	2	2																															20	12	32	

TABLE VIII.—CAUSES OF DEATH, 1889.—Continued.

CAUSES OF DEATH.																																SEX.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
Under 1.		1 and under 2.		2 to 3.		3 to 5.		5 to 10.		10 to 15.		15 to 20.		20 to 30.		30 to 40.		40 to 50.		50 to 60.		60 to 70.		70 to 80.		80 to 90.		90 and over.		Age not stated.		Total.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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Thrush.....																																2	—																															—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—			—	—

TABLE IX.—CLASSIFICATION AND PERCENTAGE, 1889.

Showing what part of the Mortality in the whole State and in each Division is ascribed to each cause and class of causes.

NUMBER OF DEATHS IN EACH DIVISION.										PERCENTAGE OF DEATHS IN EACH DIVISION.									
										</									

CLASS II.																											
		Diathetic..		312		853		4.97		8.87		5.64		4.57		5.53		4.52		4.95		5.88		3.94		5.76	
		Tubercular		312		853		13.64		16.28		14.36		15.06		12.60		12.38		9.91		11.77		11.81		12.03	
CLASS III.																											
		Dis. of Nervous System.....		697		467		11.13		13.63		9.42		10.18		10.13		12.07		12.69		11.77		11.59		15.39	
		Dis. of Respiratory System.....		467		805		7.46		8.58		3.51		8.03		5.91		7.33		9.29		7.57		7.22		9.14	
		Dis. of Digestive Organs.		805		356		12.85		10.35		10.13		13.44		15.46		13.40		11.15		12.60		10.28		13.95	
		Dis. of Urinary Organs.....		356		272		5.70		5.91		4.23		5.80		5.53		5.25		6.19		6.72		7.44		4.80	
		Dis. of Reproductive Organs.....		272		10		4.35		2.95		3.06		4.98		3.62		3.84		5.26		3.36		3.52		7.69	
		Dis. of Os. and Locomo. System.....		10		18		.16		.29		.24		.39		.29		.15		.62		.31		.48		.48	
		Dis. of Integumentary System.....		18		10		.16		.30		.24		.20		.37		.37		.37		.37		.37		.37	
CLASS IV.																											
		Developmental Dis. of Children...		355		122		5.66		2.95		9.66		4.86		5.53		6.84		5.57		1.68		7.00		4.33	
		Developmental Dis. of Women...		27		9		.43		1.18		.47		.35		.57		.22		.31		.31		.88		.48	
		Developmental Dis. of Old Age...		227		71		3.63		7.98		1.88		2.81		4.59		3.03		4.03		8.40		5.02		4.80	
		Developmental Dis. of Nutrition.		145		14		2.32		2.67		2.11		.56		4.39		4.44		7.43		2.52		.66		.66	
CLASS V.																											
		Accident and Negligence.....		216		101		3.46		3.85		3.11		4.02		2.86		3.64		2.16		5.04		3.06		.96	
		Homicide.....		3		3		.05		.05		.11		.11		.11		.11		.11		.11		.11		.11	
		Suicide.....		24		10		.38		.38		.39		.39		.19		.44		1.55		.44		.44		.44	
		Otherwise.....		80		29		1.28		1.77		.71		1.16		.76		1.63		1.55		1.68		1.32		1.44	
CLASS I.—ZYMOTIC.																											
<i>Order One.—Miasmatic Dis.</i>																											
		Cholera Infantum.....		427		136		6.82		3.54		20.92		5.40		6.11		6.38		4.96		4.20		7.00		9.14	
		Cholera Morbus.....		26		14		.41		.24		.55		.19		.44		.44		.62		.31		.96		.96	
		Croup.....		80		33		1.28		.30		1.88		1.25		.76		1.11		.31		.31		3.28		1.44	
		Diphtheria.....		184		97		2.93		2.07		2.35		3.88		3.24		2.15		2.79		1.68		2.20		1.44	

<i>Order Three.—Dietic Diseases.</i>									
2	1	1	8	4	14	1	1	50	.24
31	Alcoholism.....	3	3	3	3	3	3	.56	.76
6	Delirium Tremens.....	3	3	3	3	3	3	.11	.22
30	Inanition.....	3	9	3	12	3	3	.48	.57
7	Purpura and Scurvy.....	1	1	6	6	3	3	.23	.07
<i>Order Four.—Parasitic Diseases.</i>									
2	Aphæ.....	1	1	1	1	1	1	.04	.19
CLASS. II.—CONSTITUTIONAL.									
<i>Order One.—Diathetic Diseases.</i>									
2	Gout.....	1	1	1	1	1	1	.03	.04
44	Dropsy.....	4	15	5	4	11	2	.70	.59
21	Anæmia.....	3	5	2	7	3	1	.33	.30
88	Cancer, Various.....	38	18	5	38	5	12	1.40	3.54
19	Cancer of Breast.....	2	1	1	10	1	1	.26	.30
22	Cancer of Liver.....	1	1	4	9	2	3	.35	.89
38	Cancer of Stomach.....	2	8	4	11	7	7	.60	2.07
22	Cancer of Uterus.....	1	3	2	14	1	1	.35	.30
3	Noma.....	1	1	1	2	1	1	.05	.30
23	Mortification.....	1	3	4	8	2	3	.38	.47
30	Rheumatism.....	3	3	4	11	3	3	.51	.89
<i>Order Two.—Tubercular Diseases.</i>									
17	Scrofula.....	2	2	1	6	1	1	.27	.30
11	Tubes Mesenterica.....	2	2	1	5	1	1	.18	.15
727	Phthisis Pulmonalis.....	20	45	11	315	57	53	11.61	15.68
13	Hydrocephalus.....	3	6	3	3	1	1	.20	.24
45	Tubercular Meningitis.....	1	1	9	28	2	1	.73	.30
40	Tuberculosis.....	2	2	5	22	1	1	.64	.19
CLASS III.—LOCAL.									
<i>Order One.—Diseases of the Nervous System.</i>									
106	Encephalitis.....	5	7	1	21	11	2	1.69	.59
3	Cerebritis.....	1	2	2	44	12	2	.05	.210
CLASS IV.—LOCAL.									
2	Scrofula.....	2	2	1	6	1	1	.27	.30
11	Tubes Mesenterica.....	2	2	1	5	1	1	.18	.15
727	Phthisis Pulmonalis.....	20	45	11	315	57	53	11.61	15.68
13	Hydrocephalus.....	3	6	3	3	1	1	.20	.24
45	Tubercular Meningitis.....	1	1	9	28	2	1	.73	.30
40	Tuberculosis.....	2	2	5	22	1	1	.64	.19

TABLE IX.—CLASSIFICATION AND PERCENTAGE, 1889.—Continued.

NUMBER OF DEATHS IN EACH DIVISION.										CAUSES OF DEATH.										PERCENTAGE OF DEATHS IN THE WHOLE STATE.										PERCENTAGE OF DEATHS IN EACH DIVISION.									
Bristol County.		Kent County.		Newport County Towns.		Newport City.		Providence County Towns.		Providence City.		Pawtucket.		Providence County Towns.		Newport City.		Newport County Towns.		Kent County.		Bristol County.																	
Washington County.		Woonsocket.		Providence City.		Pawtucket.		Providence County Towns.		Newport City.		Newport County Towns.		Kent County.		Bristol County.																							
15	14	1	13	46	19	82	5	15	210	Apoplexy...	3.36	4.43	1.17	3.24	3.62	3.41	4.03	.84	5.04	3.08	7.21																		
3	18	6	8	19	4	24	8	18	113	Paralysis...	1.81	5.32	1.88	.92	.76	1.48	2.48	5.04	3.94	3.85																			
				11	3	8			22	Insanity...	.55			.32	.57	.81																							
				1					1	Chorea...	.02					.07																							
1	3		2	6		4	1	2	19	Epilepsy...	.30	.59	.24	.16		.44	.62			.66	.48																		
				2		2		3	7	Tetanus...	.11	.89		.08		.15																							
3	6	1	7	35	11	58	12	3	136	Convulsions...	2.17	.89	2.82	2.32	2.10	2.89	2.16	.84	1.32	1.44																			
2	5	4	6	19	5	34	2		80	Brain Diseases...	1.28	.89	.47	1.36	.95	1.41	1.85	3.36	1.10	.96																			
<i>Order Two.—Diseases of the Circulatory System.</i>																																							
1		1	3	5	3	15	1		29	Pericarditis...	.47		.24	.59	.57	.37	.93	.84			.48																		
2				2		3			7	Aneurism...	.11			.12		.15			.44																				
18	31	8	27	92	28	181	14	29	431	Heart Diseases...	6.88	8.58	3.29	7.21	5.35	6.82	8.36	6.72	6.78		8.66																		
<i>Order Three.—Diseases of the Respiratory Organs.</i>																																							
1		2	1	1	1				6	Laryngitis...	.09				.19	.07	.31	1.68			.48																		
2	3	4	12	43	29	91	21	9	214	Bronchitis, Acute...	3.43	2.67	4.96	3.65	5.53	3.18	3.72	3.36	.66	.96																			
2	5		2	10	3	19	3	2	46	Bronchitis, Chronic...	.77	.59	.71	.74	.57	.74	.62		1.10	.96																			
1				5	4	11	1	1	23	Pleurisy...	.38	.30	.24	.43	.76	.37				.48																			
18	37	8	21	114	39	208	16	22	483	Pneumonia...	7.69	6.50	3.76	8.27	7.45	8.45	6.50	6.72	8.10	8.66																			
1	2			2	3	5	2	1	16	Asthma...	.23	.30	.47	.20	.57	.15			.44	.48																			
4		1		6	2	4			17	Lung Diseases...	.27			.15	.38	.44		.84		1.92																			

<i>Order Four.—Diseases of the Digestive Organs.</i>														
42	Gas- tritis.	7	4	15	2	2	6	6	4	6	6	15	2	2
78	Enteritis.	3	6	18	3	4	18	3	4	18	3	32	4	7
63	Peritonitis.	5	6	13	5	7	13	5	7	13	5	23	7	3
7	Ascites.	1	...	4	...	1	...	...	...	...	...	1	...	1
1	Ulceration of Intestines.	...	...	...	...	...	...	...	...	...	...	1	...	...
10	Hernia.	1	...	1	...	1	...	1	...	1	...	7	1	...
30	Ileus.	6	1	8	...	9	1	8	...	9	1	9	1	4
2	Intussusception.	...	...	...	...	...	...	...	...	...	...	2	...	...
1	Stricture of Intestines.	...	...	...	...	...	...	...	...	...	...	1	...	...
1	Fistula.	...	...	...	...	...	...	...	...	...	...	1	...	...
33	Stomach Diseases.	...	6	5	...	15	1	5	...	15	1	15	1	1
7	Hepatitis.	2	1	2	...	...	2	2	...	...	2	...	...	...
11	Jaundice.	...	1	3	...	6	...	3	...	6	...	...	...	...
63	Liver Diseases.	1	...	11	9	29	2	11	9	29	2	29	2	2
7	Bowel Diseases.	...	...	1	2	4	...	1	2	4	...	4	...	...
<i>Order Five.—Dis. of Urinary Organs</i>														
32	Nephritis.	...	4	2	2	1	2	2	2	2	2	23	1	...
144	Nephria (Bright's Disease)	13	9	21	4	60	9	21	4	60	9	60	9	8
32	Diabetes	1	2	7	5	14	1	7	5	14	1	14	1	...
5	Calculus (Gravel etc.)	...	1	...	...	4	...	...	...	4	...	4	...	...
18	Cystitis.	1	1	5	...	9	...	5	...	9	...	9	...	...
1	Prostate Disease.	...	...	...	...	...	...	...	...	...	...	...	...	...
34	Kidney Diseases.	1	4	5	6	13	2	5	6	13	2	13	2	2
6	Bladder Diseases.	...	...	2	2	2	...	2	2	2	...	2	...	...
<i>Order Six.—Diseases of the Gen- itive Organs. Female.</i>														
4	Ovarian Dropsy.	...	...	1	...	3	...	1	...	3	...	3	...	...
6	Diseases of Uterus.	1	...	1	...	4	...	1	...	4	...	4	...	...
<i>Order Seven.—Osseous and Locomo- tory System.</i>														
2	Bones, Diseases of.	...	...	1	...	1	...	1	...	1	...	1	...	...
1	Joint Diseases.	...	...	...	...	...	...	...	...	...	...	...	1	...
15	Vertebre, Diseases of.	...	2	3	...	9	...	3	...	9	...	9	...	1

TABLE IX.—CLASSIFICATION AND PERCENTAGE, 1889.—Continued.

NUMBER OF DEATHS IN EACH DIVISION.										PERCENTAGE OF DEATHS IN EACH DIVISION.									
CAUSES OF DEATH.										Percentage in the Whole State.									
Whole State.										Washington County.									
Providence County.										Providence City.									
Providence Towns.										Pawtucket.									
Newport City.										Providence County Towns.									
Newport County Towns.										Newport City.									
Kent County.										Newport County Towns.									
Bristol County.										Kent County.									
Bristol County.										Bristol County.									
Order Eight.—Integumentary System.										Percentage in the Whole State.									
7 Phlegmon.....										.11									
3 Skin Diseases.....										.05									
CLASS IV.—DEVELOPMENTAL.																			
Order One.—Developmental Diseases of Children.																			
11 Debility, Infantile.....										1.78									
84 Debility, Premature Birth.....										1.34									
11 Cyanosis.....										.18									
4 Spina Bifida.....										.06									
15 Other Malformations.....										.23									
44 Teething.....										.72									
86 Inanition.....										1.37									
Order Two.—Developmental Diseases of Women.																			
27 Childbirth.....										.43									
Order Three.—Developmental Diseases of Old People.																			
237 Old Age.....										3.63									

TABLE X.—*Causes of Deaths Registered in Rhode Island,*

Class.	CAUSES OF DEATH. ¹	1854.	1855.	1856.	1857.	1858.
	ALL CAUSES.....	1,806	1,970	2,225	2,510	2,793
	SPECIFIED CAUSES.. .. .	1,655	1,782	1,919	2,222	2,483
	[CLASSES.]					
I.	ZYMOTIC DISEASES.....	596	457	567	570	716
II.	CONSTITUTIONAL DISEASES.....	553	479	447	573	620
III.	LOCAL DISEASES.....	329	434	475	563	614
IV.	DEVELOPMENTAL DISEASES	221	338	369	434	446
V.	VIOLENT DEATHS.	56	74	61	82	87
	[ORDERS.]					
I.	1. Miasmatic Diseases.....	580	441	548	537	676
	2. Enthetic Diseases.....	....	2	3	....	4
	3. Dietic Diseases.....	11	8	15	29	26
	4. Parasitic Diseases.....	5	6	1	4	10
II.	1. Diathetic Diseases.....	58	68	88	106	112
	2. Tubercular Diseases.....	395	411	359	467	508
	DISEASES OF—					
III.	1. Nervous System.....	161	181	185	221	223
	2. Organs of Circulation.....	40	66	43	67	67
	3. Respiratory Organs.....	73	103	151	164	198
	4. Digestive Organs.....	43	57	67	68	93
	5. Urinary Organs.....	4	13	10	26	17
	6. Organs of Generation.....	4	3	5	2	7
	7. Organs of Locomotion.....	1	2	7	6	6
	8. Integumentary System.....	3	9	7	9	3
	DEVELOPMENTAL DISEASES OF—					
IV.	1. Children.....	119	198	221	249	253
	2. Women.....	7	9	14	13	24
	3. Old People.....	67	84	76	119	114
	4. Diseases of Nutrition.....	28	47	58	53	55
V.	1. Accident or Negligence.....	53	57	56	73	73
	2. Battle.....	....	....	....	....	....
	3. Homicide.....	....	9	1	1	1
	4. Suicide.....	3	8	4	8	13
	CAUSES ILL-DEFINED.....	20	19	14	30	14
	CAUSES NOT STATED.....	131	169	292	258	296

¹ Stillborns included only in this table.

for each of the Thirty-six Years, 1854 to 1889.

1859.	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.
2,447	2,853	3,073	2,714	3,318	3,498	3,582	3,142	3,052	3,124	3,602	3,472	3,567	4,449	4,631
2,184	2,628	2,853	2,505	3,081	3,255	3,335	2,938	2,827	2,788	3,251	3,276	3,275	3,986	4,344
512	644	771	599	1,068	1,158	1,244	768	595	602	878	793	730	1,117	1,238
598	698	729	702	713	687	744	725	748	718	814	834	808	868	879
564	715	788	674	748	816	717	808	837	786	848	885	975	1,167	1,242
421	436	457	423	427	478	497	505	525	567	589	627	635	688	829
89	135	108	107	125	116	103	132	122	115	122	137	127	146	156
472	607	724	565	1,019	1,113	1,224	750	569	582	853	761	694	1,083	1,215
12	2	5	4	6	5	2	6	6	3	2	6	6	10	4
23	29	34	24	36	31	10	7	11	11	20	20	19	23	14
5	6	8	6	7	9	8	5	9	6	3	6	11	1	5
96	131	126	122	141	123	139	132	123	130	144	167	151	187	198
502	567	603	580	572	564	635	593	625	588	670	667	657	681	681
217	245	287	231	272	294	281	293	316	274	319	339	365	423	450
64	73	168	113	99	124	99	117	115	116	128	120	146	190	193
161	215	224	175	217	236	208	239	214	235	239	235	269	313	322
88	136	101	112	104	114	86	111	120	87	97	116	117	136	154
23	29	27	25	35	28	26	29	43	46	46	48	57	77	85
....	1	9	1	3	1	4	1	1	2	...	1	....	5	3
9	5	15	8	9	7	5	5	6	12	11	15	5	11	18
2	11	17	9	9	12	8	13	22	14	8	11	16	12	17
247	255	244	210	205	220	280	261	270	298	293	339	311	350	462
14	13	19	23	21	23	18	24	26	22	27	28	34	36	29
117	116	132	143	161	193	152	178	188	206	217	204	232	233	254
43	52	62	47	40	42	47	42	41	41	52	56	58	69	84
79	119	93	91	104	106	90	119	102	97	105	105	108	126	145
....	....	....	7	3	2	1	1	....	....	....	....	....	....	....
1	4	3	1	5	2	....	1	5	....	2	5	....	2	3
9	12	12	8	13	6	12	11	15	18	15	27	19	18	8
22	37	18	21	20	34	40	33	30	48	51	59	43	87	70
241	188	202	188	217	269	207	171	195	288	300	137	249	376	217

TABLE X.—*Causes of Deaths Registered in Rhode Island,*

Class.	CAUSES OF DEATH. ¹	1874.	1875.	1876.	1877.	1878.
	ALL CAUSES.....	4,506	4,563	4,340	4,692	4,689
	SPECIFIED CAUSES.....	4,297	4,300	4,095	4,444	4,430
	[CLASSES.]					
I.	ZYMOTIC DISEASES.....	1,242	1,028	990	1,338	1,234
II.	CONSTITUTIONAL DISEASES.....	786	940	968	997	986
III.	LOCAL DISEASES.....	1,283	1,404	1,303	1,254	1,371
IV.	DEVELOPMENTAL DISEASES.....	836	757	681	693	680
V.	VIOLENT DEATHS.....	150	171	153	162	159
	[ORDERS.]					
I.	1. Miasmatic Diseases.....	1,203	992	946	1,296	1,202
	2. Emetic Diseases.....	11	11	12	17	10
	3. Dietic Diseases.....	25	18	27	17	16
	4. Parasitic Diseases.....	3	7	5	8	6
II.	1. Diathetic Diseases.....	155	193	199	231	185
	2. Tubercular Diseases.....	631	747	769	766	801
	DISEASES OF—					
III.	1. Nervous System.....	418	441	437	463	481
	2. Organs of Circulation.....	217	191	168	187	172
	3. Respiratory Organs.....	349	495	429	322	430
	4. Digestive Organs.....	172	159	148	153	165
	5. Urinary Organs.....	85	85	69	98	92
	6. Organs of Generation.....	3	1	2	4	1
	7. Organs of Locomotion.....	15	16	27	15	10
	8. Integumentary System.....	24	16	23	12	20
	DEVELOPMENTAL DISEASES OF—					
IV.	1. Children.....	490	416	332	362	368
	2. Women.....	44	35	30	29	26
	3. Old People.....	223	216	241	213	222
	4. Diseases of Nutrition.....	79	90	78	89	64
V.	1. Accident or Negligence.....	128	142	131	137	135
	2. Battle.....	...	...	...	...	...
	3. Homicide.....	4	3	4	3	3
	4. Suicide.....	18	26	18	22	21
	CAUSES ILL-DEFINED.....	57	56	32	56	49
	CAUSES NOT STATED.....	152	207	213	192	210

¹ Stillborns included only in this table.

for each of the *Thirty-Six* years, 1854 to 1889.—Continued.

1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	Total and Percentage for 35 Years, 1854-1888.	
4,688	5,021	5,280	5,327	5,535	5,413	5,660	6,142	6,616	6,889	6,588	141,189	100.00
4,386	4,742	4,878	5,011	5,327	5,352	5,544	6,052	6,562	6,815	6,500	132,822	94.07
1,158	1,300	1,190	1,170	1,077	1,145	1,074	1,311	1,764	1,644	1,374	34,288	24.29
975	930	1,069	1,051	1,136	1,119	1,194	1,226	1,084	1,214	1,165	29,542	20.92
1,465	1,613	1,660	1,756	2,024	1,961	2,205	2,357	2,498	2,663	2,635	41,802	29.61
661	742	777	819	905	906	870	945	992	1,078	1,083	22,254	15.76
127	157	182	215	185	221	201	213	224	216	243	4,936	3.49
1,128	1,269	1,151	1,119	1,012	1,075	1,008	1,251	1,684	1,563	1,273	32,912	23.31
12	10	8	17	21	30	19	23	33	40	25	362	.25
16	21	29	32	42	38	47	35	46	40	74	850	.62
2	....	2	2	2	2	....	2	1	1	2	164	.11
221	205	239	213	260	253	296	262	264	307	312	6,025	4.26
754	725	830	838	876	866	898	964	820	907	833	23,517	16.66
524	551	591	602	634	650	642	727	779	805	697	14,323	10.14
208	237	271	262	333	293	354	333	411	442	467	6,166	4.37
418	508	464	481	577	517	670	696	721	792	805	12,060	8.54
165	169	187	245	236	250	253	319	310	329	356	5,267	3.73
113	119	110	118	173	178	215	222	220	244	272	2,835	2.01
....	7	3	6	26	14	14	12	14	10	10	170	.12
20	15	11	25	26	32	34	26	23	15	18	473	.34
17	7	23	17	19	27	23	22	20	26	10	508	.36
326	326	410	408	456	448	453	502	539	596	598	11,717	8.29
36	36	38	22	44	39	28	31	29	33	27	924	.66
220	273	247	283	275	293	267	276	278	290	227	7,003	4.96
79	107	82	106	130	126	122	136	146	159	231	2,610	1.85
113	146	155	178	157	197	178	194	206	190	216	4,288	3.04
....	....	....	....	....	....	....	....	....	....	....	14	.01
1	1	4	6	3	2	3	2	2	5	3	92	.07
13	10	23	31	25	22	20	17	16	21	24	542	.37
48	46	55	45	22	19	57	39	35	46	40	1,372	.98
254	233	347	271	186	42	59	51	19	28	39	6,995	4.95

TABLE X.—Continued.

Class.	CAUSES OF DEATH.	1854.	1855.	1856.	1857.	1858.
I.	ORDER 1.					
	1. Small Pox ¹	11	5	9	....	1
	2. Measles.....	15	3	2	6	75
	3. Scarlet Fever.....	46	71	208	147	234
	4. Diphtheria.....	....	....	....	....	6
	5. Cerebro Spinal Meningitis.....	....	....	....	....	....
	6. Quinsy ².....	....	....	....	....	....
	7. Croup.....	43	48	62	70	66
	8. Whooping Cough.....	14	4	19	9	13
	9. Typhoid Fever ³	39	63	53	76	42
	10. Erysipelas.....	8	15	12	14	20
	11. Metria (Puerperal Fever).....	2	6	10	8	7
	12. Carbuncle.....	....	....	1	....	1
	13. Influenza.....	1	4	....	15	6
	14. Diarrhœa.....	24	51	34	52	42
	15. Dysentery.....	118	71	51	65	61
	16. Cholera Infantum.....	68	91	77	70	93
	17. Cholera ⁴	191	7	6	3	2
	18. Intermittent Fever.....	....	....	1	....	....
	19. Remittent Fever ⁵.....	....	2	3	2	4
II.	ORDER 2.					
	1. Syphilis.....	....	1	2	....	3
	2. Gonorrhœa.....	....	....	....	....	....
	3. Hydrophobia.....	....	....	1	....	....
	4. Glanders.....	....	....	....	....	....
	5. Malignant Pustule.....	....	1	....	....	1
	6. Septicæmia.....	....	....	....	....	....
	ORDER 3.					
	1. Inanition.....	1	....	1	....	....
	2. Purpura and Scurvy.....	....	1	1	4	5
	3. Alcoholism, { Delirium Tremens.....	5	4	5	10	13
	{ Intemperance.....	5	3	8	15	8
	ORDER 4.					
	1. Thrush.....	4	5	1	3	9
	2. Worms.....	1	1	....	1	1
III.	ORDER 1.					
	1. Gout.....	....	....	....	....	....
	2. Dropsy.....	31	32	50	48	44
	3. Anæmia.....	6	4	4	6	12
	4. Cancer.....	18	27	26	37	44
	5. Noma (Canker).....	....	....	....	....	1
	6. Mortification.....	2	3	4	8	7
	7. Rheumatism.....	1	2	4	7	4
	ORDER 2.					
	1. Serofula.....	5	8	7	11	11
	2. Tabes Mesenterica.....	....	....	....	4	6
	3. Phthisis (Consumption).....	349	345	305	400	426
	4. Hydrocephalus (Tubercular Meningitis).....	40	58	47	52	65
	5. Tuberculous Diseases ⁶	1	....	....	....	....
	ORDER 1.					
	1. Cephalitis.....	19	26	19	25	42
	2. Apoplexy.....	25	33	39	42	43
	3. Paralysis.....	6	20	9	21	21
	4. Insanity.....	6	8	14	16	14
	5. Chorea.....	....	....	....	1	....
	6. Epilepsy.....	....	8	6	8	9
	7. Tetanus.....	3	3	4	6	1
	8. Convulsions.....	68	53	64	57	57
	9. Brain Diseases, etc.....	34	31	30	45	36
	ORDER 2.					
	1. Pericarditis.....	2	1	1	2	....
	2. Aneurism.....	....	1	1	....	1
	3. Heart Diseases, etc.....	38	63	41	65	66

¹ Includes Chicken Pox. ² Includes Mumps. ³ Includes Bilious, Typhus and Continued Fevers.

Causes of Deaths Registered in Rhode Island.

1859.	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.
5	9	5	7	7	12	22	2	1	2	3	6	12	25	28
3	8	11	12	36	26	16	15	12	20	19	26	6	24	63
71	64	57	47	91	266	255	28	14	93	286	75	66	54	287
20	67	140	81	155	160	82	64	31	20	33	33	57	48	45
.....	.....	.....	.....	.....	2	5	1	4	3	1	3	14	23	62
.....	3	.....	1	.....	2	1	.....	.....	.....	1	3	.....	.....	1
58	57	58	76	97	105	94	53	50	30	41	53	72	66	68
46	46	45	15	24	31	56	28	12	26	48	39	25	27	32
70	67	94	84	128	116	233	152	126	86	106	157	130	190	172
15	26	14	11	14	28	21	16	25	25	14	21	18	23	39
11	9	7	4	14	14	13	7	8	12	10	16	18	9	17
1	.....	1	.....	.....	.....	1	2	.....	1	2	1	2	.....	1
2	2	3	3	6	5	1	1	1	2	.....	.....	.....	1	1
49	41	44	60	62	93	76	49	39	45	50	47	45	100	64
53	49	96	52	262	110	188	148	118	52	74	55	43	83	36
61	151	134	106	114	133	145	110	117	154	151	213	172	391	285
6	7	12	6	9	9	14	72	11	10	11	11	13	18	13
.....	.....	.....	.....	.....	1	.....	2	.....	.....	2	.....	.....	.....	.....
1	1	3	.....	.....	.....	1	.....	.....	1	1	2	1	1	1
.....
5	2	5	3	2	5	2	5	5	3	.....	5	6	9	3
.....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....
6	.....	.....	.....	3	.....	.....	1	.....	.....	2	1	.....	1	1
.....
.....
1	3	4	2	4	4	.....	.....	1	1	2	3	2	.....	.....
7	10	4	5	7	4	3	3	5	4	9	3	7	6	4
15	16	26	17	25	23	7	4	5	6	9	14	10	17	10
.....
3	3	4	4	3	8	5	2	8	4	3	4	11	.....	5
2	3	4	2	4	1	3	3	1	2	.....	2	.....	1	.....
.....
41	56	48	46	52	45	61	49	49	49	53	61	56	55	60
2	5	3	4	12	4	3	3	2	4	4	2	6	4	3
43	44	58	61	62	61	55	64	58	60	66	80	66	95	106
.....	.....	1	.....	.....	1	.....	2	.....	.....	.....	.....	1	5	1
3	10	10	7	8	5	12	4	7	6	4	7	9	7	11
7	16	6	4	7	7	8	10	7	11	17	17	13	21	17
.....
8	9	14	14	13	14	12	5	9	3	11	19	22	9	20
2	1	3	3	.....	3	7	2	2	2	10	4	5	5	7
436	505	523	513	512	498	547	526	563	517	555	577	535	600	584
56	52	63	50	47	49	63	56	41	57	76	51	71	44	52
.....	.....	.....	.....	.....	.....	6	4	10	9	18	16	24	23	18
.....
20	41	43	36	54	49	39	46	52	40	54	42	44	57	109
51	51	57	43	52	54	55	56	72	57	69	64	77	58	67
28	32	40	36	31	42	45	36	52	54	48	68	79	67	67
16	11	13	7	10	15	20	13	14	13	14	18	16	26	19
2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
6	4	11	6	6	3	7	4	12	5	5	4	10	13	15
3	5	5	6	8	4	6	3	3	3	2	5	5	8	2
50	70	70	55	71	73	73	83	68	63	79	85	83	116	97
41	31	48	42	40	54	36	52	43	38	48	55	51	78	74
.....
1	3	2	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
1	1	1	2	.....	.....	1	.....	1	.....	.....	3	2	1	2
62	69	105	111	99	123	98	116	114	116	128	117	144	189	191

⁴ Includes Cholera Morbus. ⁵ Includes Yellow Fever. ⁶ Includes Tubercle and Tuberculosis.

TABLE X.—Continued.

Class.	CAUSES OF DEATH.	1874.	1875.	1876.	1877.	1878.
I.	ORDER 1.					
	1. Small Pox ¹	8	4	1	5	1
	2. Measles.....	7	2	4	11	81
	3. Scarlet Fever.....	462	185	80	62	86
	4. Diphtheria.	59	33	158	492	435
	5. Cerebro Spinal Meningitis.....	16	13	7	8	11
	6. Quinsy ².....	....	....	....	4	3
	7. Croup.....	65	96	102	95	93
	8. Whooping Cough.....	45	31	48	32	54
	9. Typhoid Fever ³	121	150	123	123	136
	10. Erysipelas.....	26	21	18	21	17
	11. Puerperal Fever.....	16	18	18	17	17
	12. Carbuncle.....	....	1	1	3	....
	13. Influenza.....	2	6	....	1	....
	14. Diarrhœa.....	65	70	72	90	53
	15. Dysentery.....	38	36	50	52	40
	16. Cholera Infantum.....	265	318	250	259	168
	17. Cholera ⁴	8	8	13	20	6
	18. Intermittent Fever.....	....	....	....	1	....
	19. Remittent Fever ⁵.....	....	....	....	....	1
	ORDER 2.					
	1. Syphilis.....	7	8	8	10	4
	2. Gonorrhœa.....	....	1	2	2	....
	3. Hydrophobia.....	....	1	2	2	3
	4. Glanders.....	....	....	....	1	....
	5. Malignant Pustule.....	1	....	....	2	....
	6. Septicæmia.....	3	1	....	....	3
	ORDER 3.					
	1. Inanition.....	....	....	1	....	....
	2. Purpura and Senfvy.....	3	1	5	5	1
	3. Alcoholism, { Delirium Tremens.....	3	4	6	4	3
	{ Intemperance.....	19	13	15	8	12
	ORDER 4.					
	1. Thrush.....	2	5	4	8	4
	2. Worms.....	1	2	1	....	2
II.	ORDER 1.					
	1. Gout.....	....	....	....	....	....
	2. Dropsy.....	39	56	66	63	38
	3. Anæmia.....	2	4	2	1	2
	4. Cancer.....	87	95	106	135	119
	5. Noma (Canker).....	....	2	....	....	1
	6. Mortification.....	5	10	11	8	9
	7. Rheumatism.....	22	26	14	24	16
	ORDER 2.					
	1. Scrofula.....	20	21	18	11	13
	2. Tabes Mesenterica.....	3	4	5	10	6
	3. Phthisis (Consumption).....	536	657	660	665	685
	4. Hydrocephalus (Tubercular Meningitis).....	51	57	68	55	70
	5. Tuberculous Diseases ⁶	21	8	18	25	27
III.	ORDER 1.					
	1. Cephalitis.....	60	66	80	81	81
	2. Apoplexy.....	70	67	95	109	102
	3. Paralysis.....	86	99	70	72	86
	4. Insanity.....	13	32	19	12	22
	5. Chorea.....	....	....	....	1	....
	6. Epilepsy.....	16	20	12	19	8
	7. Tetanus.....	8	5	2	5	8
	8. Convulsions.....	98	100	89	83	112
	9. Brain Diseases, etc.....	67	52	70	81	62
	ORDER 2.					
	1. Pericarditis.....	....	....	....	....	....
	2. Aneurism.....	1	4	2	4	6
	3. Heart Diseases, etc.....	216	187	166	183	166

¹ Includes Chicken Pox. ² Includes Mumps. ³ Includes Bilious, Typhus and Continued Fevers.

Causes of Death Registered in Rhode Island.

1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	Total and Percentage for 35 Years, 1854-1888.	
1	.....	3	2	2	.....	.....	.....	.....	.....	.....	199	.14
.....	9	37	6	14	18	45	18	132	11	29	793	.53
311	468	138	45	34	97	91	88	266	207	51	5,080	3.60
259	152	216	101	95	119	99	238	287	191	184	3,367	2.83
10	20	19	28	26	21	16	10	24	22	9	368	.26
.....	1	2	.....	3	1	1	1	8	4	7	40	.03
96	66	101	77	71	80	94	90	113	79	80	2,588	1.84
43	20	68	71	9	43	42	49	21	44	77	1,179	.84
101	141	117	214	239	128	105	121	116	224	135	4,343	3.08
25	17	37	30	28	25	36	31	32	31	28	774	.53
9	15	22	28	16	12	19	10	25	18	17	462	.33
1	.....	2	1	3	4	1	2	3	.....	.....	36	.03
4	.....	3	1	.....	2	2	7	.....	7	4	89	.07
53	70	77	90	130	113	84	93	133	80	88	2,340	1.68
44	28	42	68	54	40	36	66	66	77	71	2,522	1.80
161	247	240	325	242	325	279	377	355	467	427	7,114	4.98
8	11	18	24	25	18	24	17	18	30	26	679	.48
.....	.....	1	8	21	29	34	43	83	69	38	295	.22
2	4	9	.....	.....	.....	.....	.....	2	2	2	44	.04
10	10	4	16	18	14	7	12	13	11	13	218	.15
.....	.....	2	.....	.....	.....	1	1	1	2	1	14	.01
.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2	12	.01
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.00
.....	.....	1	1	.....	3	1	.....	1	2	1	29	.02
2	.....	1	.....	3	13	10	10	18	24	8	88	.07
.....	.....	2	1	10	7	22	20	28	19	30	112	.08
1	6	3	4	3	1	3	3	2	5	7	84	.07
3	1	10	7	8	3	5	3	1	2	6	181	.13
12	14	14	20	21	27	17	9	15	14	31	473	.34
1	.....	1	2	2	2	.....	2	1	.....	2	123	.08
1	.....	1	.....	.....	.....	.....	.....	.....	1	.....	41	.03
.....	.....	.....	.....	.....	1	.....	1	.....	2	.....	3	.00
50	37	47	50	47	40	44	47	39	47	44	1,606	1.20
8	8	4	4	7	7	6	15	16	13	21	192	.14
125	125	145	132	169	156	193	159	159	193	189	3,229	2.26
1	2	.....	.....	1	5	.....	.....	.....	.....	3	24	.02
13	9	14	6	9	10	19	6	15	19	23	297	.22
24	24	29	21	27	34	34	34	34	35	30	584	.42
13	12	15	14	22	20	18	23	21	12	17	477	.35
3	3	8	4	5	15	7	19	6	13	11	177	.13
645	652	712	744	766	739	783	827	710	800	727	20,397	14.44
57	46	56	49	54	56	47	54	54	50	58	1,914	1.35
36	12	59	27	20	36	43	41	29	32	40	552	.39
79	88	107	95	91	78	94	104	112	133	109	2,206	1.57
137	119	146	154	157	182	185	230	206	211	210	3,235	2.27
83	96	101	111	118	116	104	107	122	156	113	2,327	1.67
17	19	32	23	29	36	35	49	64	43	22	728	.51
.....	3	.....	.....	1	.....	.....	2	1	2	1	14	.01
13	14	13	14	18	11	23	14	17	16	19	370	.26
6	3	8	8	8	5	4	8	7	9	7	179	.13
104	133	102	110	126	139	111	121	159	154	136	3,176	2.23
85	76	82	87	86	83	86	92	91	81	80	2,088	1.49
.....	.....	.....	.....	17	.....	10	21	29	23	29	113	.08
1	2	2	2	8	3	4	2	5	6	7	71	.05
207	235	269	260	308	290	340	310	377	413	431	5,982	4.24

⁴ Includes Cholera Morbus. ⁵ Includes Yellow Fever. ⁶ Includes Tubercle and Tuberculosis.

TABLE X.—Continued.

Class.	CAUSES OF DEATH.	1854.	1855.	1856.	1857.	1858.
III.	ORDER 3.					
	1. Epistaxis.....	...	...	...	...	...
	2. Laryngitis.....	1	1	5	2	5
	3. Bronchitis.....	3	4	5	7	13
	4. Pleurisy.....	10	12	13	10	12
	5. Pneumonia.....	54	79	120	141	166
	6. Asthma.....	2	2	3	2	2
	7. Lung Diseases, etc.....	3	5	5	2	...
	ORDER 4.					
	1. Gastritis.....	3	3	8	9	1
	2. Enteritis.....	11	13	14	13	23
	3. Peritonitis.....	2	13	17	5	10
	4. Ascites.....	3	...	...	...	...
	5. Ulceration of Intestines.....	...	...	...	...	...
	6. Hernia.....	2	2	...	...	5
	7. Ileus.....	3	10	10	9	6
	8. Intussusception.....	...	...	...	...	...
	9. Stricture of Intestines.....	...	1	...	2	...
	10. Fistula.....	...	...	...	...	1
	11. Stomach Diseases.....	5	4	11	7	8
	12. Pancreas Diseases.....	...	...	...	...	...
	13. Hepatitis.....	...	...	...	...	...
	14. Jaundice.....	2	2	...	3	4
	15. Liver Diseases, etc.....	6	6	7	18	31
	16. Spleen Diseases, etc.....	2	...	...	...	...
	17. Bowel Diseases, etc.....	4	3	...	2	4
	ORDER 5.					
	1. Nephritis (Bright's Disease, etc).....	...	...	...	...	...
	2. Ischuria.....	...	2	...	2	...
	3. Diabetes.....	...	3	3	3	3
	4. Calculus (Gravel, etc).....	1	...	...	...	2
	5. Cystitis.....	1	1	2	...	...
	6. Prostate Disease.....	1	...	...	5	2
	7. Kidney Diseases, etc.....	1	5	5	13	8
	8. Bladder Diseases, etc.....	...	2	...	3	2
	ORDER 6.					
	1. Ovarian Dropsy.....	...	2	3	...	4
	2. Uterine Diseases, etc.....	4	1	2	2	3
	ORDER 7.					
	1. Anthritis.....	...	...	...	...	...
	2. Joint Diseases, etc.....	1	2	7	6	6
	ORDER 8.					
	1. Phlegmon.....	...	7	4	3	2
	2. Ulcer.....	2	...	1	2	...
	3. Skin Diseases, etc.....	1	2	2	4	1
IV.	ORDER 1.					
	1. Still-born.....	78	124	183	185	177
	2. Infantile Debility, Premature Birth, etc.....	13	34	17	17	33
	3. Cyanosis.....	1	1	1	...	...
	4. Spina Bifida.....	...	...	...	...	2
	5. Other Malformations.....	7	11	5	12	12
	6. Teething.....	20	28	15	35	29
	ORDER 2.					
	1. Paramenia.....	...	...	...	...	...
	2. Childbirth.....	7	9	14	13	24
	ORDER 3.					
	1. Old Age.....	67	84	76	119	114
	ORDER 4.					
	1. Atrophy and Debility.....	28	47	58	53	55

Causes of Deaths Registered in Rhode Island.

1859.	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.
4	8	2	1	1	1	1	1	1	2	4	2	2	2	4
9	18	18	7	17	7	10	17	19	22	20	28	24	26	29
18	20	21	17	14	16	16	20	16	13	19	12	18	12	14
125	162	163	147	174	201	175	193	172	191	190	182	218	229	234
2	3	8	3	8	7	3	4	4	5	3	8	4	4	7
3	4	12	....	3	4	3	4	2	2	3	3	3	40	34
4	11	....	4	8	11	6	2	9	7	9	10	....	16	10
21	23	24	30	27	27	20	30	34	19	25	29	36	15	24
13	14	7	14	5	19	13	13	11	9	6	8	11	24	17
....
1	2	5	4	7	2	5	1	6	5	4	6	7	2	4
6	16	9	7	5	5	7	9	11	6	8	5	13	3	5
1	1	....	....	....	1	1	1	2	1	1	1	....	1	2
....	1	....	....	1	....	....	....	....	....	....	....	....	....	1
8	9	17	8	12	4	2	4	8	7	2	8	14	13	15
....
6	9	....	6	....	4	4	7	5	4	6	6	....	2	....
3	7	4	5	2	3	3	6	3	4	3	2	....	2	2
20	31	31	32	34	37	20	37	30	23	28	37	35	31	43
....	....	....	....	1	....	1	....	1	....	2	....	....	....	2
5	12	4	2	2	1	4	1	....	2	3	4	1	27	29
3	1	....	....	....	....	1	8	17	16	18	15	24	37	39
....	1	....	....	....	....	....	....	....	....	....	....	....	....	....
3	8	8	2	4	6	6	6	1	11	6	8	5	7	8
1	1	....	1	4	2	2	2	3	3	3	1	4	5	2
4	2	....	4	4	....	....	....	....	....	....	....	....	....	....
....	1	1	....	....	....	2	....	....	3	1	2	2	2	4
12	15	15	17	22	16	13	8	15	8	14	16	19	18	27
....	....	3	1	1	4	2	5	7	5	4	6	3	8	5
....	....	2	....	....	....	....	....	....	....	....	....	....	....	....
....	1	7	1	3	1	4	1	1	2	....	1	....	5	3
....
9	5	15	8	9	7	5	5	6	12	11	15	5	11	18
1	7	11	4	7	9	7	8	15	10	4	9	11	10	10
....	3	....	3	....	1	....	2	3	2	4	2	2	1	5
1	1	6	2	2	2	1	3	4	2	....	....	3	1	2
177	167	146	123	111	138	177	172	163	212	220	234	223	202	228
25	42	45	35	47	46	62	54	60	47	34	57	53	100	169
....	....	....	2	....	....	....	....	....	....	....	....	....	....	....
....	....	3	....	....	....	....	....	....	....	....	....	....	....	....
14	15	10	11	13	8	10	12	17	16	15	14	15	17	15
31	31	40	39	34	28	31	23	30	23	24	34	20	31	50
....
14	13	19	22	21	21	18	24	26	22	27	28	34	36	29
117	116	132	143	161	193	152	178	188	206	217	204	232	223	254
43	52	62	47	40	42	47	42	41	41	52	56	58	69	84

TABLE X.—Continued.

Class.	CAUSES OF DEATH.	1874.	1875.	1876.	1877.	1878.
III.	ORDER 3.					
	1. Epistaxis.....	..	..	..	..	..
	2. Laryngitis.....	3	4	3	2	2
	3. Bronchitis.....	40	58	57	73	80
	4. Pleurisy.....	10	10	9	5	8
	5. Pneumonia.....	250	400	339	226	317
	6. Asthma.....	10	10	7	8	8
	7. Lung Diseases, etc.....	36	13	14	8	15
	ORDER 4.					
	1. Gastritis.....	8	28	13	22	14
	2. Enteritis.....	37	29	36	39	40
	3. Peritonitis.....	20	28	24	17	22
	4. Ascites.....	..	..	..	..	..
	5. Ulceration of Intestines.....	..	..	..	..	..
	6. Hernia.....	6	1	7	5	7
	7. Ileus.....	1	..	8	8	12
	8. Intussusception.....	..	..	..	..	3
	9. Stricture of Intestines.....	..	1	..	..	..
	10. Fistula.....	..	..	..	..	..
	11. Stomach Diseases.....	33	13	10	7	13
	12. Pancreas Diseases.....	..	..	..	..	..
	13. Hepatitis.....	..	..	5	6	5
	14. Jaundice.....	4	4	1	7	4
	15. Liver Diseases, etc.....	36	43	39	39	40
	16. Spleen Diseases, etc.....	1	1	..	2	1
	17. Bowel Diseases, etc.....	26	11	5	1	4
	ORDER 5.					
	1. Nephritis (Bright's Disease, etc.).....	42	40	38	46	54
	2. Ischuria.....	..	..	..	..	..
	3. Diabetes.....	5	11	5	9	4
	4. Calculus (Gravel, etc.).....	4	2	1	9	1
	5. Cystitis.....	..	..	..	..	..
	6. Prostate Disease.....	..	3	4	2	4
	7. Kidney Diseases, etc.....	24	25	12	21	27
	8. Bladder Diseases, etc.....	10	4	9	11	2
	ORDER 6.					
	1. Ovarian Dropsy.....	..	..	..	..	1
	2. Uterine Diseases, etc.....	3	4	2	4	1
	ORDER 7.					
	1. Anthritis.....	..	..	..	..	..
	2. Joint Diseases, etc.....	15	16	27	15	10
	ORDER 8.					
	1. Phlegmon.....	18	9	18	7	13
	2. Ulcer.....	3	3	3	2	2
	3. Skin Diseases, etc.....	3	4	2	3	5
IV.	ORDER 1.					
	1. Still-born.....	277	246	224	242	248
	2. Infantile Debility, Premature Birth, etc.....	154	135	75	67	72
	3. Cyanosis.....	..	..	..	..	..
	4. Spina Bifida.....	..	..	..	..	..
	5. Other Malformations.....	17	15	11	26	32
	6. Teething.....	42	20	22	27	16
	ORDER 2.					
	1. Paramenia.....	..	..	..	..	..
	2. Childbirth.....	44	35	30	29	26
	ORDER 3.					
	1. Old Age.....	223	216	241	213	222
	ORDER 4.					
	1. Atrophy and Debility.....	79	90	78	89	64

Causes of Deaths Registered in Rhode Island.

1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	Total and Percentage for 35 Years, 1854-1888.	
2	8	6	7	5	11	9	9	1	2	....	3	.00
67	94	86	101	111	118	168	174	176	228	260	1,334	.09
13	17	9	8	13	5	7	12	15	18	23	462	1.37
311	364	327	314	400	363	465	481	488	508	483	8,899	.33
13	11	16	9	14	10	21	15	20	18	16	274	.30
12	14	20	12	34	10	....	5	13	11	17	352	.20
17	18	27	30	35	27	29	30	34	37	42	500	.25
34	33	44	75	47	76	64	85	43	88	78	1,228	.35
24	24	27	30	40	40	35	59	66	60	63	747	.88
....	....	....	....	1	2	....	2	....	1	7	9	.53
....	....	....	....	4	1	....	1	5	3	1	14	....
12	8	10	11	7	11	10	15	13	11	10	204	.01
9	9	10	8	11	8	17	13	15	22	30	304	.14
2	....	5	5	3	6	4	1	....	3	2	44	.21
....	....	....	....	1	....	2	1	2	....	1	13	.04
....	....	....	....	....	....	....	1	1	1	1	4	.01
13	10	12	14	16	16	22	29	34	24	33	432	.31
....
5	6	8	8	7	10	6	9	9	3	7	146	.10
3	3	3	8	6	5	9	2	12	12	11	143	.10
44	49	35	50	38	40	47	60	65	53	63	1,215	.87
....	....	....	....	....	2	....	1	1	1	....	19	.01
2	9	6	6	20	7	8	10	10	10	7	245	.17
61	56	54	44	93	90	143	140	130	192	176	1,401	1.00
....	....	....	....	2	....	....	....	....	....	....	8	.01
15	15	16	13	15	25	21	24	22	13	32	314	.22
1	....	1	....	1	....	1	....	1	1	5	60	.04
....	....	....	....	8	7	12	23	17	10	18	95	.07
4	4	1	3	7	4	4	8	7	4	1	85	.07
20	35	25	44	36	39	25	24	39	21	34	684	.48
12	9	13	14	11	13	9	3	4	3	6	188	.13
....	....	....	....	6	12	8	8	5	5	4	55	.04
....	7	3	6	20	2	6	4	9	5	6	115	.08
20	15	11	25	26	32	34	26	1	....	1	1	.00
....	....	....	....	....	....	....	....	22	15	17	472	.34
14	5	17	14	18	18	21	13	15	19	7	358	.25
....	....	3	2	1	4	....	6	1	....	....	63	.04
3	2	3	1	....	5	2	3	4	7	3	87	.07
216	192	264	253	253	272	271	293	276	295	329	7,262	5.15
69	93	92	101	137	128	132	157	211	230	195	2,843	2.02
....	3	....	....	17	5	6	11	10	16	11	73	.05
....	....	....	....	....	....	....	....	....	4	4	9	.00
19	13	26	21	19	22	15	15	18	16	15	534	.37
22	25	28	33	30	21	29	26	24	35	44	996	.70
1	....	....	....	2	4	2	....	1	....	....	13	.01
36	36	38	22	42	35	26	31	28	33	27	911	.65
220	273	247	283	275	293	267	276	278	290	227	7,003	4.96
79	107	82	106	130	126	122	136	146	159	231	2,610	1.85

TABLE X.—Concluded.

Class.	CAUSES OF DEATH.	1854.	1855.	1856.	1857.	1858.
V.	ORDER 1. (ACCIDENTS OR NEGLIGENCE.)					
	1. Fractures or Contusions ¹	1	....	4	....	....
	2. Burns and Scalds.....	9	14	12	7	6
	3. Drowning.....	15	18	13	20	24
	4. Falls.....	....	....	....	....	....
	5. Poison.....	3	6	4	3	5
	6. Suffocation and Strangulation.....	2	....	7	3	....
	7. Otherwise.....	23	19	16	40	38
	ORDER 2.					
	1. Battle.....	....	....	....	....	....
	ORDER 3.					
	1. Homicide.....	....	9	1	1	1
	ORDER 4.					
	1. Suicide.....	3	8	4	8	13
	Causes ill-defined.....	20	19	14	30	14
	Causes not stated.....	131	169	292	258	296

¹ Include railroad accidents.

Causes of Deaths Registered in Rhode Island.

1859.	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.
.....	.....	.....	.....	.....	.....	.....	12	8	8	6	9	12	15	16
13	24	21	14	10	12	16	18	16	16	15	12	12	12	14
24	32	29	29	21	26	20	27	23	20	24	30	24	29	36
.....	.....	.....	.....	.....	.....	.....	17	14	18	21	19	25	18	15
4	7	9	2	1	3	2	6	2	.....	4	2	4	1	5
1	1	3	3	1	1	1	.....	.....	.....	.....	.....	.....	.....	4
37	55	31	43	71	64	51	39	39	35	35	33	31	51	55
.....	.....	.....	7	3	2	1	1	.....	.....	.....	.....	.....	.....	.....
1	4	3	1	5	2	.....	1	5	.....	2	5	.....	2	3
9	12	12	8	13	6	12	11	15	18	15	27	19	18	8
22	37	18	21	20	34	40	33	30	48	51	59	43	87	70
241	188	202	188	217	209	207	171	195	288	300	137	249	376	217

TABLE X.—Concluded.

Class.	CAUSES OF DEATH.	1874.	1875.	1876.	1877.	1878.
V.	ORDER 1. (ACCIDENTS OR NEGLIGENCE.)					
	1. Fractures and Contusions ¹	16	12	10	13	7
	2. Burns and Scalds.....	23	17	12	18	11
	3. Drowning.....	39	35	37	30	44
	4. Falls.....	12	20	12	14	13
	5. Poison.....	5	6	4	9	6
	6. Suffocation and Strangulation.....	6	5	9	5	....
	7. Otherwise.....	27	47	47	48	54
	ORDER 2.					
	1. Battle.....	....	1	....	....	....
	ORDER 3.					
	1. Homicide.....	4	3	4	3	3
	ORDER 4.					
	1. Suicide.....	18	26	18	22	21
	Causes ill-defined.....	57	56	32	56	49
	Causes not stated.....	152	207	213	192	210

¹ Include railroad accidents.

Causes of Deaths Registered in Rhode Island.

1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	Total and Percentage for 35 Years, 1854-1888.	
10	18	20	16	16	16	15	20	47	33	48	360	.25
13	21	16	17	18	20	19	23	17	27	20	545	.38
22	33	29	40	27	41	42	58	39	46	52	1,046	.74
16	14	19	31	21	31	25	19	17	18	31	429	.31
7	5	9	7	10	8	9	6	7	12	7	183	.13
....	....	19	8	12	11	10	10	14	8	9	144	.10
45	55	43	59	53	70	58	58	65	46	49	1,581	1.13
....	....	....	....	....	....	....	....	....	....	....	14	.01
1	1	4	6	3	2	3	2	2	5	3	92	.06
13	10	23	31	25	22	20	17	16	21	24	542	.38
48	46	55	45	22	19	57	39	35	46	49	1,372	.98
254	233	347	271	186	42	59	51	19	28	30	6,995	4.95

TABLE XI.—OCCUPATIONS AND AGES OF DECEDENTS.

Showing the number and occupations of decedents for the year 1889, and for a period of thirty-six years and seven months, 1852 to 1888 inclusive. Ages under Twenty excluded.

OCCUPATIONS.	STATE OF RHODE ISLAND.					
	1889.			36 Years and 7 Months, June 1, 1852, to Dec. 31, 1888.		
	Total Mortality.	Aggregate Ages.	Average Age.	Total Mortality.	Aggregate Ages.	Average Age.
I.						
TILLERS OF THE SOIL.						
Farmers.....	207	13,928	67.54	5,169	342,238	66.21
Florists.....				19	889	47.16
Gardeners.....	9	530	58.89	179	10,710	59.83
Total.....	216	14,458	66.85	5,367	353,837	65.93
II.						
PROFESSIONAL AND PERSONAL.						
Actors.....				8	268	36.00
Architects.....				5	264	52.80
Artists.....	1	57	57.00	27	1,324	49.04
Assayers and Analytical						
Chemists.....	1	48	48.00	3	191	63.67
Authors.....	1	87	87.00	5	329	65.80
Civil Engineers.....	1	71	71.00	27	1,389	51.04
Clergymen.....	2	121	65.50	175	11,049	63.14
Dentists.....	2	94	47.00	18	925	51.40
Designers.....	1	39	39.00	9	491	54.56
Draughtsmen.....				6	227	37.83
Inspectors.....				1	56	56.00
Inventors.....				7	444	63.43
Journalists (Editors and						
Reporters).....	1	27	27.00	21	994	47.33
Judges and Justices.....				13	862	66.31
Lawyers.....	7	478	68.29	126	6,785	53.85
Lecturers.....				1	46	46.00
Musicians.....	2	76	38.00	43	1,967	45.73
Nurses.....				9	499	55.44
Photographers and Lith-						
ographers.....	2	93	46.50	17	736	43.29
Physicians.....	6	376	62.67	219	12,981	59.27
Professors and Teachers..	2	96	48.00	109	5,247	48.14
Public Officers.....	1	54	54.00	58	3,449	59.47

TABLE XI.—OCCUPATIONS AND AGES.—Continued.

OCCUPATIONS.	STATE OF RHODE ISLAND.					
	1889.			36 Years and 7 Months, June 1, 1852, to Dec. 31, 1888.		
	Total Mortality.	Aggregate Ages.	Average Age.	Total Mortality.	Aggregate Ages.	Average Age.
Sheriffs, Constables and Policemen.....	5	277	55.40	76	4,306	56.66
Sculptors.....				1	53	53.00
Stenographers.....				1	29	29.00
Students.....	1	21	21.00	53	1,184	22.34
Telephone and Telegraph Operators.....				10	313	31.30
Theatrical Managers....	1	37	37.00			
Veterinary Surgeons....				1	33	33.00
Weighers, Guagers, etc..				5	345	69.00
Total.....	37	2,052	55.46	1,054	56,786	53.87
III.						
OPTIONAL ACTIVITY.						
Agents and Canvassers...	10	474	47.40	130	6,985	53.73
Auctioneers.....				6	274	45.67
Bankers and Brokers....	7	403	57.56	89	5,319	59.76
Bank Officers.....	3	216	72.00	54	3,483	64.44
Bartenders.....				12	418	34.84
Booksellers.....				1	78	78.00
Bottlers.....	1	38	38.00	1	29	29.00
Butchers and Marketmen.	10	581	58.10	189	9,645	51.03
Carriage Dealers.....				1	55	55.00
Clothiers.....	2	96	48.00	7	433	61.86
Coal Dealers.....				1	25	25.00
Collectors.....	1	72	72.00	13	782	60.15
Contractors and Builders.	8	506	63.25	39	2,108	54.05
Dealers in Wool Waste..				1	56	56.00
Druggists and Apothecaries.....	2	119	59.50	55	2,526	45.93
Electricians.....	1	64	64.00			
Fish and Oyster Dealers..	5	348	69.60	1	58	58.00
Fruiterers.....	1	40	40.00	1	30	30.00
Grain Dealers.....	1	69	69.00	1	44	44.00
Grocers.....	9	459	51.00	324	17,332	53.49
Hardware Dealers.....	1	56	56.00	1	52	52.00
Hotel-keepers and Inn-keepers.....	7	418	59.71	111	6,008	54.13

TABLE XI.—OCCUPATIONS AND AGES.—Continued.

OCCUPATIONS.	STATE OF RHODE ISLAND.					
	1889.			36 Years and 7 Months, June 1, 1852, to Dec. 31, 1888.		
	Total Mortality.	Aggregate Ages.	Average Age.	Total Mortality.	Aggregate Ages.	Average Age.
Ice-cream Makers.....				1	36	36.00
Junk Dealers.....				7	386	55.14
Leather Dealers.....				1	35	35.00
Liquor Dealers.....	5	243	48.60	65	2,887	44.41
Lottery Dealers.....				1	31	31.00
Lumber Dealers.....	2	98	49.00	4	165	41.25
Mail-carriers.....	1	39	39.00	7	300	42.86
Manufacturers.....	22	1,446	65.73	422	24,427	59.28
Merchants.....	30	1,967	65.57	928	54,091	58.29
Opticians.....	2	114	57.00	2	141	70.50
Organ and Piano Tuners.				3	207	69.00
Pork and Meat Cutters, and Pork-packers....	3	98	32.67	6	271	45.17
Provision Dealers.....	1	46	46.00	2	114	57.00
Railroad Officials.....	3	158	52.67	61	2,753	45.13
Saloon and Restaurant Keepers.....	4	178	44.50	124	5,581	45.01
Ship-chandlers.....				3	194	64.67
Shoe Dealers.....	1	75	75.00	3	157	52.33
Stablekeepers.....	1	76	76.00	50	2,644	52.88
Tobacconists.....	3	181	60.37	7	414	59.14
Traders.....				274	13,750	50.18
Undertakers.....	4	289	72.25	24	1,406	58.58
Various and Unspecified Tradesmen.....	20	1,006	53.00	114	6,428	56.39
Total.....	171	9,973	58.32	3,137	172,158	54.88
IV.						
OUTDOOR.—Local.						
Boat-builders.....				22	1,311	59.59
Brickmakers.....				4	181	45.25
Brick and Stonelayers...	1	26	26.00	5	260	52.00
Calkers.....				8	594	74.25
Carpenters and Joiners..	74	4,431	59.88	1,392	75,094	53.95
Masons.....	26	1,651	63.50	577	32,359	56.07
Millwrights.....	3	244	83.33	25	1,581	63.24
Pavers.....				1	70	70.00
Riggers.....				21	1,167	55.57

TABLE XI.—OCCUPATIONS AND AGES.—Continued.

OCCUPATIONS.	STATE OF RHODE ISLAND.					
	1889.			36 Years and 7 Months, June 1, 1852, to Dec. 31, 1888.		
	Total Mortality.	Aggregate Ages.	Average Age.	Total Mortality.	Aggregate Ages.	Average Age.
Roofers	1	56	56.00	1	27	27.00
Sash and Blind makers.. ..	.....	.....	.....	8	374	44.25
Ship-carpenters.....	1	67	67.00	52	3,515	67.59
Slaters.....	.....	.....	.....	6	245	40.83
Stonecutters and marble- workers	12	576	48.00	157	7,892	50.27
Tanners and Curriers....	3	208	69.67	36	2,228	61.89
Wheelwrights	1	85	85.00	78	4,689	60.12
Total	122	7,344	60.20	2,393	131,587	59.17
V.						
INDOOR.—Active.						
Axe and Seythe Grinders. ....	.....	.....	.....	3	188	62.67
Bakers.....	6	296	49.33	95	5,158	54.21
Basket-makers.	1	52	52.00	2	121	60.50
Bell-hangers.....	.....	.....	.....	1	24	24.00
Belt-makers.....	.....	.....	.....	7	411	58.71
Blacksmiths and Farriers.	23	1,291	56.13	462	24,635	53.31
Bleachers and Fullers ...	1	60	60.00	48	2,404	50.08
Bobbin-makers .....	.....	.....	.....	1	62	62.00
Boilermakers.	4	149	37.25	48	1,806	37.63
Boltmakers.....	.....	.....	.....	1	60	60.00
Bonnet-dressers .....	.....	.....	.....	2	73	36.50
Brass-finishers.....	.....	.....	.....	3	117	39.00
Brass and Iron Founders.	.....	.....	.....	8	472	59.00
Brewers.....	.....	.....	.....	11	525	47.72
Britannia-workers .....	.....	.....	.....	1	65	65.00
Broom and Brush Makers.	2	84	42.00	9	438	48.67
Cabinetmakers.....	4	175	43.75	105	6,135	58.43
Calico-printers.....	.....	.....	.....	54	2,889	53.50
Cardmakers. ....	.....	.....	.....	3	151	50.33
CarriageMakers and Trim- mers.....	1	48	48.00	53	2,759	52.06
Carvers .....	.....	.....	.....	3	147	49.00
Chairmakers.....	.....	.....	.....	1	70	70.00
Combmakers. ....	.....	.....	.....	3	118	39.33
Confectioners.....	1	71	71.00	32	1,371	42.84
Cooks and Caterers. ...	3	153	51.00	42	2,003	47.68

TABLE XI.—OCCUPATIONS AND AGES.—Continued.

OCCUPATIONS.	STATE OF RHODE ISLAND.					
	1889.			36 Years and 7 Months, June 1, 1852, to Dec. 31, 1888.		
	Total Mortality.	Aggregate Ages.	Average Age.	Total Mortality.	Aggregate Ages.	Average Age.
Coopers.....	2	131	65.50	107	7,063	66.01
Coppersmiths.....	1	49	49.00	5	347	69.40
Cutters.....	.....	.....	.....	3	153	51.00
Distillers.....	.....	.....	.....	1	77	77.00
Dyers.....	6	303	50.50	82	4,162	50.76
Founders.....	.....	.....	.....	10	381	38.10
Foundrymen.....	.....	.....	.....	3	185	61.67
Furnacemen.....	.....	.....	.....	3	130	43.33
Gasfitters.....	2	58	29.00	37	1,588	42.93
Gilders.....	.....	.....	.....	7	279	39.43
Gold-refiners.....	.....	.....	.....	3	153	51.00
Gun and Locksmiths....	1	86	86.00	21	1,129	53.76
Hatters.....	1	83	83.00	20	1,052	52.60
Heaters.....	.....	.....	.....	1	44	44.00
Iron Rollers and Workers	.....	.....	.....	2	107	53.50
Japanners.....	.....	.....	.....	1	47	47.00
Lathers.....	.....	.....	.....	2	58	29.00
Linemakers.....	.....	.....	.....	2	117	58.50
Machinists.....	35	1,643	46.94	990	47,412	47.89
Mechanics.....	13	680	52.31	402	21,229	52.81
Melters.....	1	69	69.00	.....	.....	.....
Miners.....	1	47	47.00	9	465	51.67
Moulders.....	18	922	51.22	183	8,141	44.48
Nailcutters.....	.....	.....	.....	11	422	38.35
Oil Refiners.....	.....	.....	.....	1	76	76.00
Painters and Glaziers....	38	1,946	51.21	542	24,718	45.79
Paper-hangers.....	2	104	52.00	11	576	52.36
Pattern-makers.....	2	100	50.00	42	2,274	54.14
Pianoforte-makers.....	.....	.....	.....	2	90	45.00
Picker-makers.....	.....	.....	.....	5	303	60.00
Plane-makers.....	.....	.....	.....	1	79	79.00
Plasterers and Stucco- workers.....	1	37	37.00	28	1,395	49.96
Platers.....	1	64	64.00	1	76	76.00
Plumbers.....	3	104	34.67	48	1,908	39.75
Pump and Block Makers.	.....	.....	.....	14	788	55.71
Reed-makers.....	1	53	53.00	1	60	60.00
Refiners.....	.....	.....	.....	3	84	28.00
Scissors-grinders.....	.....	.....	.....	1	70	70.00
Soapboilers.....	.....	.....	.....	2	118	59.00

TABLE XI.—OCCUPATIONS AND AGES.—Continued.

OCCUPATIONS.	STATE OF RHODE ISLAND.					
	1889.			36 Years and 7 Months, June 1, 1852, to Dec. 31, 1888.		
	Total Mortality.	Aggregate Ages.	Average Age.	Total Mortality.	Aggregate Ages.	Average Age.
Spindle-makers.....	1	60	60.00	4	237	59.25
Stair-builders	1	66	66.00	3	153	51.00
Steampipers. ....	.....	.....	.....	1	56	56.00
Steel-polishers .....	.....	.....	.....	1	42	42.00
Stone Manufacturers.....	.....	.....	.....	7	416	59.43
Stopper-makers.....	.....	.....	.....	1	22	22.00
Stove-makers	1	37	37.00	.....	.....	.....
Sugar-refiners .....	.....	.....	.....	7	311	44.43
Superintendents and Overseers.....	11	537	48.82	153	8,147	53.25
Tallow-chandlers.....	.....	.....	.....	3	243	81.00
Tinsmiths.....	5	219	43.80	79	3,469	43.91
Tool-makers	3	171	57.00	9	393	45.66
Trunk-makers.....	.....	.....	.....	3	89	29.67
Umbrella-makers .....	.....	.....	.....	2	103	51.50
Upholsterers.....	2	104	52.00	31	1,115	35.96
Wire-workers.....	1	28	28.00	5	210	42.00
Wood-carvers.....	.....	.....	.....	2	54	27.00
Wood finishers .....	.....	.....	.....	2	84	42.00
Wood-turners.....	1	88	88.00	19	840	44.26
Total	201	10,168	50.87	3,937	195,542	49.67
VI.						
INDOOR.— <i>Activity Restricted.</i>						
Barbers.....	7	315	45.00	160	5,962	37.26
Bookbinders.....	1	26	26.00	17	774	45.53
Book-keepers and Accountants.....	14	639	45.64	284	12,521	44.08
Boxmakers.....	2	96	48.00	11	431	39.17
Braidmakers.....	.....	.....	.....	1	66	66.00
Burmakers.....	1	30	30.00	.....	.....	.....
Chainmakers.....	.....	.....	.....	2	118	59.00
Chasers.....	.....	.....	.....	1	45	45.00
Cigarmakers.....	1	32	32.00	85	3,683	43.33
Clerks and Salesmen	45	1,620	36.00	681	23,576	34.63
Clock and Watch Makers.....	4	237	59.25	21	1,075	51.18
Die-sinkers .....	.....	.....	.....	17	767	45.18

TABLE XI.—OCCUPATIONS AND AGES.—Continued.

OCCUPATIONS.	STATE OF RHODE ISLAND.					
	1889.			36 Years and 7 Months, June 1, 1852, to Dec. 31, 1888.		
	Total Mortality.	Aggregate Ages.	Average Age.	Total Mortality.	Aggregate Ages.	Average Age.
Enamelers.....	1	66	66.00	2	128	64.00
Engravers.....	6	281	46.83	96	4,496	46.83
File-cutters.....	8	286	35.75	49	2,098	42.82
Finishers.....	1	63	63.00	3	140	46.67
Harnessmakers and Saddlers.....	2	93	46.50	85	4,002	47.08
Jewelers.....	37	1,551	41.92	668	26,773	40.08
Lapidaries.....	.....	.....	.....	7	225	32.14
Laundrymen.....	2	96	48.00	7	277	39.57
Leather-dressers.....	.....	.....	.....	2	141	70.50
Millers.....	1	53	53.00	36	2,102	58.39
Operatives.....	99	4,179	42.12	1,556	67,149	43.15
Paper-makers.....	.....	.....	.....	3	218	72.67
Pearl-cutters.....	1	28	28.00	.....	.....	.....
Polishers.....	3	110	36.67	6	312	52.00
Printers.....	3	145	48.33	145	6,877	47.43
Roll-coverers.....	1	67	67.00	24	1,449	60.38
Rope-makers.....	.....	.....	.....	24	1,595	66.04
Rubber-workers.....	15	601	40.07	62	2,425	39.11
Sailmakers.....	.....	.....	.....	30	1,768	58.93
Shoemakers.....	20	1,186	59.30	554	26,250	57.82
Silversmiths.....	4	249	62.25	75	3,337	44.49
Tailors.....	16	844	52.75	301	16,182	53.76
Wool-sorters.....	4	142	35.50	16	721	45.06
Total.....	299	13,035	43.60	4,931	217,673	44.14
VII.						
OCCUPATIONS AT LARGE.						
Army Officers ..	1	51	51.00	1	58	58.00
Baggage Masters.....	.....	.....	.....	3	88	29.33
Boatmen.....	3	132	44.00	17	1,029	60.53
Brakemen.....	6	179	29.67	50	1,404	28.08
Car Drivers and Conductors.....	3	104	34.67	8	275	34.38
Coachmen.....	9	421	46.78	122	5,224	42.82
Drivers.....	1	35	35.00	1	73	73.00
Drovers.....	.....	.....	.....	2	83	41.50
Engineers and Firemen..	17	778	45.76	218	10,084	46.26

TABLE XI.—OCCUPATIONS AND AGES.—Continued.

OCCUPATIONS.	STATE OF RHODE ISLAND.					
	1889.			36 Years and 7 Months, June 1, 1852, to Dec. 31, 1888.		
	Total Mortality.	Aggregate Ages.	Average Age.	Total Mortality.	Aggregate Ages.	Average Age.
Expressmen	2	123	61.50	62	2,971	47.92
Fire-company Members				1	31	31.00
Fishermen and Oystermen	7	458	65.43	174	8,496	48.79
House-movers				4	284	71.00
Lumbermen				1	87	87.00
Mariners	2	101	50.50	498	24,353	48.90
Messengers				1	29	29.00
Naval Officers	2	91	45.50	14	674	48.14
Pilots				13	739	56.84
Peddlers	2	117	58.50	111	5,484	49.41
Sailors	5	257	51.40	183	8,905	48.66
Sea-captains or Ship-masters	6	424	70.67	112	7,332	65.46
Soldiers	1	46	46.00	135	4,041	29.92
Stage-drivers				6	262	43.67
Switchmen	1	67	67.00			
Teamsters	23	1,087	47.26	345	16,127	46.74
Total	91	4,471	49.13	2,083	98,193	47.14
VIII.						
No SPECIAL EMPLOYMENT.						
Billposters				1	59	59.00
Cabdrivers and Hackmen	2	75	37.50	27	1,153	42.70
Gentlemen				39	2,580	66.15
Hostlers	3	117	39.00	70	2,889	41.26
Ice-men				4	265	66.25
Janitors	3	171	57.00	39	1,987	50.96
Laborers	310	15,727	50.73	6,593	323,340	49.04
Lamp-lighters	2	83	41.50	7	355	50.71
Lighthouse-keepers	1	26	26.00	2	111	55.50
Linemen	4	164	41.00			
Milkmen				5	179	35.80
Porters	2	124	62.00	29	1,402	48.34
Servants				17	749	44.06
Sextons	1	50	50.00	3	170	56.67
Stevedores				13	618	47.54

TABLE XI.—OCCUPATIONS AND AGES.—Continued.

OCCUPATIONS.	STATE OF RHODE ISLAND.					
	1889.			36 Years and 7 Months. June 1, 1852, to Dec. 31, 1888.		
	Total Mortality.	Aggregate Ages.	Average Age.	Total Mortality.	Aggregate Ages.	Average Age.
Stewards.....	.....	.....	.....	7	247	35.29
Stove-mounters.....	.....	.....	.....	2	108	54.00
Waiters.....	.....	.....	.....	84	3,521	41.95
Watchmen.....	4	291	72.75	102	5,477	53.60
Well-diggers.....	1	87	87.00	4	295	73.75
Whitewashers.....	2	114	57.00	3	173	57.67
Wood-sawers.....	.....	.....	.....	2	105	52.50
Total.....	335	17,029	50.83	7,053	345,783	49.03
IX.						
EMPLOYMENTS OF WOMEN.						
Actresses.....	.....	.....	.....	1	24	24.00
Agents.....	.....	.....	.....	1	59	59.00
Artists.....	.....	.....	.....	2	137	68.50
Basket-makers.....	.....	.....	.....	2	149	74.50
Boardinghouse-keepers...	.....	.....	.....	19	1,231	64.79
Bookbinders.....	.....	.....	.....	1	43	43.00
Bookkeepers.....	.....	.....	.....	2	69	34.50
Boxmakers.....	.....	.....	.....	4	120	30.00
Capmakers.....	.....	.....	.....	1	28	28.00
Chainmakers.....	1	24	24.00	1	33	33.00
Cigarmakers.....	.....	.....	.....	5	140	28.00
Clerks and Saleswomen..	4	108	27.00	7	249	35.56
Cooks.....	3	172	57.33	14	785	56.07
Dressmakers and Seam-	.....	.....	.....	.....	.....	.....
stresses.....	14	567	40.50	225	9,967	44.30
Farming.....	1	59	59.00	1	89	89.00
Hairdressers.....	.....	.....	.....	1	25	25.00
Harnessmakers.....	.....	.....	.....	1	52	52.00
Housekeepers.....	238	13,058	54.88	1,403	79,178	56.43
Housewives.....	26	1,333	51.27	13	713	54.85
Jewelers.....	1	39	39.00	7	183	26.14
Laboring.....	.....	.....	.....	3	128	42.67
Laundresses.....	2	127	63.50	22	1,086	49.36
Midwives.....	.....	.....	.....	1	61	61.00
Milliners.....	1	39	39.00	44	1,471	33.43
Musicians.....	.....	.....	.....	1	31	31.00
Nurses.....	5	325	65.00	72	4,463	61.99

TABLE XI.—OCCUPATIONS AND AGES.—Concluded.

OCCUPATIONS.	STATE OF RHODE ISLAND.					
	1889.			36 Years and 7 Months, June 1, 1852, to Dec. 31, 1888.		
	Total Mortality.	Aggregate Ages.	Average Age.	Total Mortality.	Aggregate Ages.	Average Age.
Operatives.....	48	1,327	27.76	584	18,557	31.76
Physicians.....				8	455	56.88
Printers.....	1	23	23.00			
Public Officers.....				1	65	65.00
Rubber-workers.....	1	22	22.00	5	139	27.80
Servants and Domestics..	34	1,752	51.53	328	15,395	46.92
Shopkeepers.....	2	124	62.00	3	137	45.67
Sisters of Mercy.....	2	93	46.50	22	820	37.27
Stewardesses.....				1	38	38.00
Superintendents.....				2	126	63.00
Tailoresses.....	5	202	40.40	126	5,798	46.02
Teachers.....	15	572	38.13	153	6,562	42.89
Telegraph and Telephone Operators.....				1	54	54.00
Upholsterers.....				1	34	34.00
Waitresses.....				3	106	35.33
Total.....	404	19,866	49.16	3,093	148,857	48.12

TABLE XI.—OCCUPATIONS.—RECAPITULATION.

OCCUPATIONS.	STATE OF RHODE ISLAND.					
	1889.			36 Years and 7 Months, June 1, 1852, to Dec. 31, 1888.		
	Total Mortality.	Aggregate Ages.	Average Age.	Total Mortality.	Aggregate Ages.	Average Age.
I.						
TILLERS OF THE SOIL...	216	14,458	66.85	5,367	353,837	65.93
II.						
PROFESSIONAL AND PERSONAL.....	37	2,052	55.46	1,054	56,786	53.87
III.						
OPTIONAL ACTIVITY...	171	9,973	58.32	3,137	172,158	54.88
IV.						
OUTDOOR.— <i>Local</i>	122	7,344	60.20	2,293	131,587	59.17
V.						
INDOOR.— <i>Active</i>	201	10,168	50.87	3,937	195,542	49.67
VI.						
INDOOR.— <i>Activity Restricted</i>	299	13,035	43.60	4,931	217,673	44.14
VII.						
OCCUPATIONS AT LARGE.	91	4,471	49.13	2,083	98,193	47.14
VIII.						
NO SPECIAL EMPLOYMENTS.....	335	17,029	50.83	7,053	345,783	49.03
IX.						
EMPLOYMENTS OF WOMEN	404	19,866	49.16	3,093	148,857	48.12
ALL CLASSES.....	1,876	98,396	52.45	33,048	1,720,416	52.05

TABLE XII.—OCCUPATIONS AND CAUSES OF DEATH, 1889.

Ages under twenty excluded.

[illegible]

TABLE XII.—OCCUPATIONS AND CAUSES OF DEATH, 1889.—Continued.

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder Diseases.	Bowel Diseases.	Brain Diseases.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhea and Dysentery.	Dropsy.	Enteritis.	Epilepsy.	Erysipelas.	Fever, Malarial.	Fever, Typhoid, etc.	Heart Diseases.	Insanity.	Kidney Diseases.	Liver Diseases.	Old Age.	Peritonitis.	Pleurisy.	Pneumonia.	Rheumatism.	Septicæmia.	Spinal Diseases.	Stomach Diseases.	Suicide.	Tuberculosis.			
Lawyers.....	2	2	1	2				1			1										1																
Musicians.....	2																																				
Photographers.....	2																																				
Physicians.....	5	2		2						1											1																
Public Officers.....	1																																				
Sheriffs, Constables and Police- men.....	5											1									2																
Students.....	1										1																										
Teachers and Professors.....	2									1																											
Theatrical Managers.....	1																																				
III.	35	1	1	5				1	2	4		1		1		1				1	5		5	1	1				4			1		1			
OPTIONAL ACTIVITY.																																					
Agents and Canvassers.....	10	2	1								2										1						2										
Bankers and Brokers.....	7		1								2									1	2																
Bank Officers.....	3			2																																	
Bottlers.....	1																				1																
Butchers and Marketmen.....	10	2		2				1	1	1		1												2													

TABLE XII.—OCCUPATIONS AND CAUSES OF DEATH, 1889.—Continued.

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder Diseases.	Bowel Diseases.	Brain Diseases.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhea and Dysentery.	Dropsy.	Enteritis.	Epilepsy.	Erysipelas.	Fever, Typhoid, etc.	Heart Diseases.	Insanity.	Kidney Diseases.	Liver Diseases.	Old Age.	Peritonitis.	Pleurisy.	Pneumonia.	Rheumatism.	Septicæmia.	Spinal Diseases.	Stomach Diseases.	Suicide.	Tuberculosis.	
Stablekeepers.....	1	1		1																														
Tobaccoists.....	3				1				1	1																		1						
Undertakers.....	4											1								1				1										
Unspecified.....	20	1			1					1	1	2	2							1	1		6					4	1					
	169	8	4	16	1	1	1	6	4	10	19	8	6	1	2					3	3	23	3	4	3		11	2					2	
IV.																																		
Outdoor—Local.																																		
Bricklayers, etc.....	1										1																							
Carpenters and Joiners.....	70	13	6			1	3	1	1	1	10			1	2	1				1	5		4	2	3	1		14						
Masons.....	25			3	1					2	2	1			1				1		7		1	1				4				1		
Millwrights.....	3																			1		1	1	1										
Roofers.....	1	1																																
Ship-carpenters.....	1			1																														
Stonecutters and Marble-workers	12					1			3		5	1								1								1					1	
Tanners and Carriers.....	3	1																	1															
Wheelwrights.....	1					1																												
	117	15	10	1	2	4	1	4	3	18	2			1	3	1				1	2	14	6	3	4	1		19					2	

OCCUPATIONS.

V.

INDOOR—Active.

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder Diseases.	Bowel Diseases.	Brain Diseases.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhea and Dysentery.	Dropsy.	Enteritis.	Epilepsy.	Erysipelas.	Fever, Malarial.	Fever, Typhoid, etc.	Heart Diseases.	Insanity.	Kidney Diseases.	Liver Diseases.	Old Age.	Peritonitis.	Pleurisy.	Pneumonia.	Rheumatism.	Septicæmia.	Spinal Diseases.	Stomach Diseases.	Suicide.	Tuberculosis.	
V.																																			
INDOOR—Active.																																			
Bakers.....	4	1									1										2		1												
Basket-makers.....	1																			2								1							
Blacksmiths.....	23		2					1	1		4	1	1								3		2	2	2	2	1								
Bleachers.....	1																																		
Boilermakers.....	4										1									1								1							
Broom and Brush Makers.....	2																																		
Cabinetmakers.....	3										2					1													2						
Carriage Makers and Trimmers.....	1																				1														
Confectioners.....	1																																		
Cooks and Caterers.....	3																			1	1							1							
Coopers.....	2																				1														
Coppersmiths.....	1																					1													
Dyers.....	5										1			1							1											1			
Gasfitters, etc.....	2										2																								
Gun and Locksmiths.....	1		1																																
Hatters.....	1																																		
Machinists.....	34	4	1	3				1			2	1			1					3	5			1	1	1			5			1			
Mechanics.....	12	1		1							4		1							1						2							1		
Melters.....	1																																		

TABLE XII.—OCCUPATIONS AND CAUSES OF DEATH, 1889—Continued.

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder Diseases.	Bowel Diseases.	Brain Diseases.	Bronchitis.	Cancers.	Consumption.	Debility.	Diabetes.	Diarrhoea and Dysentery.	Dropsy.	Enteritis.	Epilepsy.	Erysipelas.	Revers, Malarial.	Revers, Typhoid, etc.	Heart Diseases.	Insanity.	Kidney Diseases.	Liver Diseases.	Old Age.	Peritonitis.	Pleurisy.	Pneumonia.	Rheumatism.	Septicæmia.	Spinal Diseases.	Stomach Diseases.	Suicide.	Tuberculosis.		
Miners.....	1	1									1																									
Moulders.....	18				1					2	3									1		3	1	1				1	8							
Painters and Glaziers.....	34			6	1	1	1	1	1	1	7	1								1		3	1	3		2										
Paper-hangers.....	2										1										1															
Pattern-makers.....	2																						1													
Plasterers and Stuccoworkers..	1																						1													
Platers.....	1																						1													
Plumbers.....	3								2		1												1													
Reed-makers.....	1																						1													
Spindle-makers.....	1																							1												
Stair-builders.....	1			1																																
Stove-makers.....	1													1																						
Superintendents and Overseers..	11	1	1	1	1	1				1	2	1								1	1						1									
Tinsmiths.....	5	1								1	1									1																
Tool-makers.....	3		1				1																													
Upholsters.....	2										2																									
Wire-workers.....	1																			1																
Wood-turners.....	1											1																								
	191	8	1	16	2	2	1	4	5	5	40	5	2	2	2		3				12	20	2	15	4	6		6	22	4			3		1	

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder Diseases.	Bowel Diseases.	Brain Diseases.	Bronchitis.	Cancers.	Consumption.	Debility.	Diabetes.	Diarrhea and Dysentery.	Dropsy.	Enteritis.	Epilepsy.	Erysipelas.	Fever, Typhoid, etc.	Heart Diseases.	Insanity.	Kidney Diseases.	Liver Diseases.	Old Age.	Peritonitis.	Pleurisy.	Pneumonia.	Rheumatism.	Septicæmia.	Spinal Diseases.	Stomach Diseases.	Suicide.	Tuberculosis.
Barbers.....	7	..	..	..	..	..	..	..	..	5	2	..	1	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..
Bookbinders.....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Book-keepers and Accountants.	14	1	..	3	1	..	..	1	..	4	4	..	..	..	..	..	..	..	..	1	..	..	..	..	1	1	..	..	1	..	..	..	..
Boxmakers.....	2	..	..	1	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Burmakers.....	1	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cigarmakers.....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Clerks and Salesmen.....	44	3	..	2	..	..	..	..	4	18	2	1	..	..	..	..	1	..	..	2	3	..	1	1	1	2	1	..	..	..	1	2	..
Clock and Watch Makers.....	4	1	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..
Engravers.....	5	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	..	2	..	1	..	..	..	..	..	..	..	..	..	..	..
Enamelers.....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
File-cutters.....	8	..	..	..	..	..	..	..	..	4	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	2	..	..	..	..	..	..	..
Finishers.....	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Harnessmakers and Saddlers.....	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..
Jewelers.....	36	2	2	2	..	2	..	1	1	13	..	..	..	..	..	..	..	..	2	5	1	..	1	..	1	4	1	..	..	..	1	1	1
Laundrymen.....	2	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
Millers.....	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Operatives.....	93	5	4	4	..	1	1	1	3	2	31	2	..	..	1	1	..	..	2	9	2	9	..	1	1	1	9	..	..	..	1	2	2
Pearl-cutters.....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..

VI.

INDOOR—Activity Restricted.

TABLE XII.—OCCUPATIONS AND CAUSES OF DEATH, 1889.—Continued.

OCCUPATIONS.		Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder Diseases.	Bowel Diseases.	Brain Diseases.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhoea and Dysentery.	Dropsy.	Enteritis.	Epilepsy.	Erysipelas.	Fever, Malarial.	Fever, Typhoid, etc.	Heart Diseases.	Insanity.	Kidney Diseases.	Liver Diseases.	Old Age.	Peritonitis.	Pleurisy.	Pneumonia.	Rheumatism.	Septicæmia.	Spinal Diseases.	Stomach Diseases.	Suicide.	Tuberculosis.			
Polishers.....	2											1																										
Printers.....	3											1										1																
Roll-coverers.....	1																																					
Rubber-workers.....	15				2					1	2	6			2	1	1			1																		
Shoemakers.....	20	1			2		1	1		2	1	2								1				3	2													
Silversmiths.....	3			1																				1														
Tailors.....	14				2					2	2				1						2	1		3														
Wool-sorters.....	4				1							1			1						1																	
		286	13	2	19		2	4	2	10	13	92	8	1	3	2	2		3	1	13	29	2	20	1	2	4	4	2	1		2	5	3				
VII.																																						
OCCUPATIONS AT LARGE.																																						
Army Officers.....	1																																					
Boatmen.....	3											1						1																		1		
Brakemen.....	6	4	1										1																									
Car Drivers, Conductors, etc.	3											2									1																	
Coachmen.....	9				1							1			1								1	1	1	1												
Drivers.....	1																		1																			
Engineers and Firemen.....	16	4		3							1	1										3				1											1	

[illegible]

TABLE XII.—OCCUPATIONS AND CAUSES OF DEATH, 1889.—Concluded.

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder Diseases.	Bowel Diseases.	Brain Diseases.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhea and Dysentery.	Dropsy.	Enteritis.	Epilepsy.	Erysipelas.	Fevers, Malarial.	Fevers, Typhoid, etc.	Heart Diseases.	Insanity.	Kidney Diseases.	Liver Diseases.	Old Age.	Peritonitis.	Pleurisy.	Pneumonia.	Rheumatism.	Septicæmia.	Spinal Diseases.	Stomach Diseases.	Suicide.	Tuberculosis.
Milliners.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Nurses.....	5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Operatives.....	45	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Printers.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Rubber-workers	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Servants and Domestic	29	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Sisters of Mercy.....	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Tailoresses.....	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Teachers.....	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Traders and Dealers.....	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	379	9	26	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

TABLE XII Continued.—OCCUPATIONS AND CAUSES OF DEATH, 1889.—RECAPITULATION BY CLASSES.

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder Diseases.	Bowel Diseases.	Brain Diseases.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhea and Dysentery.	Dropsy.	Enteritis.	Epilepsy.	Erysipelas.	Fevers, Malarial.	Fevers, Typhoid, etc.	Heart Diseases.	Insanity.	Kidney Diseases.	Liver Diseases.	Old Age.	Peritonitis.	Pleurisy.	Pneumonia.	Rheumatism.	Septicæmia.	Spinal Diseases.	Stomach Diseases.	Suicide.	Tuberculosis.	
I.																																			
TILLERS OF THE SOIL.....	201	11	4	21	1	3	4	3	8	9	16	11	1	5	1	3	1	1	1	..	3	28	1	10	3	22	4	1	18	3	4	1	..
II.																																			
PROFESSIONAL SERVICES.....	35	..	1	5	1	..	2	4	1	..	1	..	1	1	5	..	5	1	1	4	1	..	1
III.																																			
OPTIONAL ACTIVITY.....	169	8	4	16	1	1	1	6	4	10	19	8	6	1	2	3	31	..	23	3	4	3	..	11	2	2
IV.																																			
OUTDOOR.—Local.....	117	15	..	10	1	2	4	1	4	3	18	2	..	1	3	1	..	..	1	2	14	..	6	3	4	1	..	19	..	..	..	..	2	..
V.																																			
INDOOR.—Active.....	191	8	1	16	2	2	1	4	5	5	40	5	2	2	..	3	..	..	..	..	12	20	2	15	4	6	..	6	22	4	..	3	..	1

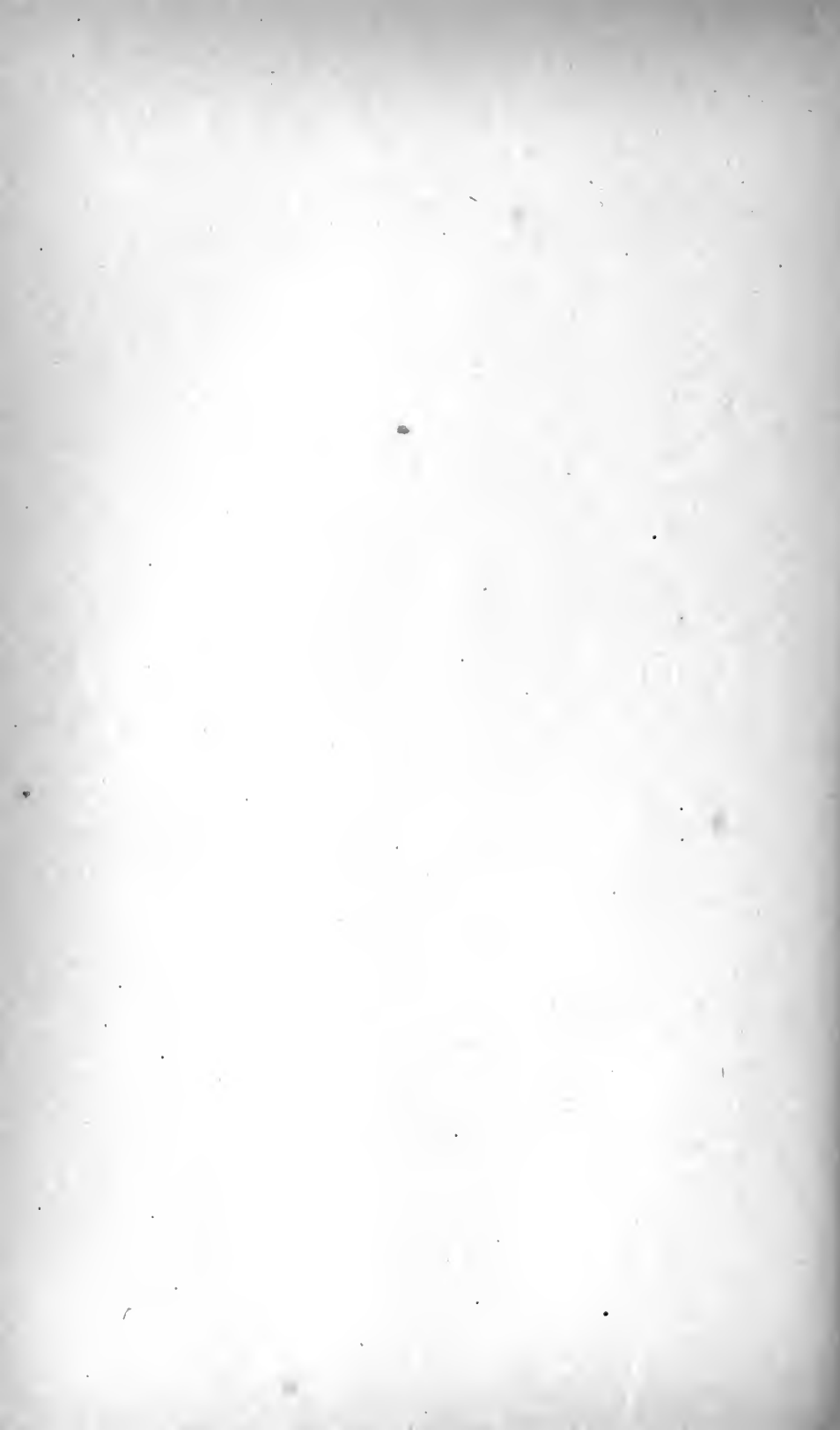
OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder Diseases.	Bowel Diseases.	Brain Diseases.	Bronchitis.	Cancer.	Consumption.	Debility.	Diabetes.	Diarrhoea and Dysentery.	Dropsy.	Enteritis.	Epilepsy.	Erysipelas.	Fever, Typhoid, etc.	Heart Diseases.	Insanity.	Kidney Diseases.	Liver Diseases.	Old Age.	Peritonitis.	Pleurisy.	Pneumonia.	Rheumatism.	Septicæmia.	Spinal Diseases.	Stomach Diseases.	Suicide.	Tuberculosis.	
VI.																																		
INDOOR— <i>Activity Restricted</i>	286	13	2	19	..	2	4	2	10	13	92	8	1	3	2	2	..	3	1	13	29	2	20	1	2	4	4	21	2	1	..	2	5	3
VII.																																		
OCCUPATIONS AT LARGE....	89	13	2	8	..	1	..	4	..	2	13	2	..	2	..	2	2	3	1	1	11	2	2	3	1	..	..	9	1	..	..	1	2	1
VIII.																																		
NO SPECIAL TRADES.....	325	26	8	17	3	4	2	5	11	9	57	11	2	6	6	4	..	..	6	12	35	2	15	5	17	2	4	35	1	1	1	11	6	1
IX.																																		
WOMEN.....	379	9	..	26	1	..	1	4	19	18	90	31	2	8	13	7	..	2	6	10	36	1	17	8	23	6	1	26	3	..	..	5	1	5
ALL CLASSES.....	1792	103	22	138	9	15	17	30	61	71	349	79	14	29	27	23	3	9	15	57	209	10	113	31	80	20	16	165	16	2	1	27	17	14

OCCUPATIONS.		Whole Number.	Abscesses.	Aneurism.	Arthritis.	Calculus.	Cerebro-Spinal Meningitis.	Convulsions.	Diphtheria.	Gangrene.	Gout.	Hemorrhage.	Hernia.	Homicide.	Hydrophobia.	Jaundice.	Laryngitis.	Lung Diseases.	Scrofula.	Shock.	Scurvy.	Syphilis.	Tetanus.	Tumors.	Unknown.
OPERATIVES.	Operatives.....	6	..	1	..	..	..	..	..	..	..	1	..	..	..	1	..	2	..	..	..	..	..	..	1
	Painters and Glaziers.....	4	1	..	..	..	..	1	..	..	..	..	..	..	..	..	1	1	..	..	1	..	..	..
	Physicians.....	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
	Polishers.....	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Silversmiths.....	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Tailors.....	2	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
		59	2	3	1	4	3	..	2	8	1	1	4	2	2	1	1	2	6	1	2	1	2	3	1
		14	..	..	..	..	5	1	1	3	..	..	1	1	..	..	..	..	..	1	1	..	..	..	..
	Housekeepers.....	3	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Housewives.....	3	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
OPERATIVES.	Operatives.....	5	..	..	..	..	..	1	1	1	..	..	..	..	..	..	1	1	1	1	1	..	..	1	1
	Servants and Domestic.....	25	1	..	..	8	2	2	4	..	..	1	1	..	..	..	1	1	1	2	..	..	..	1	1
		84	2	4	1	4	3	8	2	4	1	5	3	2	1	1	2	7	2	4	1	2	3	2	7
	Total.....	84	2	4	1	4	3	8	2	4	1	5	3	2	1	1	2	7	2	4	1	2	3	2	7

FEMALES.



RESULTS AND OBSERVATIONS.



GENERAL SUMMARY.

The number of births registered in the State of Rhode Island, during the year 1889, was eight thousand two hundred and twenty (8,220); the number of marriages, three thousand and twenty-nine (3,029); and the number of deaths, six thousand two hundred and fifty-nine (6,259).

TABLE XIII.

General Results of Registration for ten years, and for each of the last twenty-six years.

Years.	Whole Number.		Living		
	of Births.	Still-born.	Births.	Marriages.	Deaths.
1854-1863.....	38,042.....	1,471.....	36,571.....	14,943.....	24,230.....
1864.....	3,892.....	138.....	3,754.....	1,844.....	3,360.....
1865.....	3,955.....	177.....	3,778.....	1,896.....	3,405.....
1866.....	4,902.....	172.....	4,730.....	2,318.....	2,970.....
1867.....	5,127.....	163.....	4,964.....	2,344.....	2,889.....
1868.....	5,372.....	212.....	5,160.....	2,285.....	2,912.....
1869.....	5,245.....	220.....	5,025.....	2,289.....	3,382.....
1870.....	5,215.....	234.....	4,981.....	2,362.....	3,238.....
1871.....	5,678.....	223.....	5,455.....	2,336.....	3,344.....
1872.....	6,143.....	202.....	5,941.....	2,537.....	4,247.....
1873.....	6,022.....	228.....	5,794.....	2,630.....	4,403.....
1874.....	6,466.....	277.....	6,189.....	2,541.....	4,229.....
1875.....	6,508.....	246.....	6,262.....	2,485.....	4,317.....
1876.....	6,329.....	224.....	6,105.....	2,253.....	4,116.....
1877.....	6,235.....	242.....	5,993.....	2,282.....	4,450.....
1878.....	6,714.....	248.....	6,466.....	2,324.....	4,441.....
1879.....	6,350.....	216.....	6,134.....	2,396.....	4,472.....
1880.....	6,295.....	192.....	6,103.....	2,769.....	4,829.....
1881.....	6,761.....	264.....	6,497.....	2,750.....	5,016.....
1882.....	6,825.....	253.....	6,572.....	2,634.....	5,074.....
1883.....	7,046.....	253.....	6,793.....	2,611.....	5,282.....
1884.....	7,305.....	272.....	7,033.....	2,558.....	5,141.....
1885.....	7,028.....	271.....	6,757.....	2,488.....	5,389.....
1886.....	7,621.....	293.....	7,328.....	2,750.....	5,849.....
1887.....	7,668.....	276.....	7,392.....	2,839.....	6,340.....
1888.....	7,840.....	295.....	7,545.....	3,022.....	6,594.....
1889.....	8,220.....	320.....	7,891.....	3,029.....	6,259.....

During the period of thirty-six years there were recorded, in Rhode Island, 200,804 births, of which number 8,016 were still-born, and 192,788 were living children.

During the same period there were recorded 79,514 marriages, or 159,028 persons married, and 140,178 deaths.

These results show that in every 25.1 births there was one still-born child, or that in every 1,000 births there were about 40 still-born and 960 living children.

The same results also show that the ratio of whole number of living births to the whole number of persons married, and to the whole number of decedents respectively, during the same period, were as follows :

	Married	Deaths.
For every 100 living births there were	82.5 and.....	72.7

There were 180 more births during 1889 than in the previous year, while there were only 47 more in 1887 than in 1886. There were but 7 more marriages during the current year than in 1888. However, the deaths diminished by 335; a fact observable in 1884, when the deaths were 141 less than in the preceding year. But, taking the years together, there is a gradual increase from year to year, of the births, marriages and deaths, although with varying proportions to the increase of the population.

TABLE XIV.

Comparative Exhibit of Births, Marriages and Deaths in each Town in Rhode Island, in each of the Five Years 1885—1889, and Excess of Births over the Deaths in 1889.

13

TOWNS AND DIVISIONS OF THE STATE.	BIRTHS.					MARRIAGES.					DEATHS.					Excess of Births over Deaths, 1889.
	1885.	1886.	1887.	1888.	1889.	1885.	1886.	1887.	1888.	1889.	1885.	1886.	1887.	1888.	1889.	
Barrington.....	27	29	18	27	25	7	5	6	12	5	17	29	20	20	21	4
Bristol.....	111	123	116	100	101	32	40	36	23	37	98	116	119	127	86	18
Warren.....	71	90	94	87	102	30	34	33	39	33	70	78	78	104	101	1
BRISTOL COUNTY.	209	242	228	214	231	69	79	75	71	75	185	223	217	251	208	23
Coventry.....	72	108	95	103	101	31	39	22	33	23	72	76	67	81	100	4
East Greenwich.....	71	47	71	73	68	26	32	31	26	37	72	49	44	69	58	10
West Greenwich.....	23	14	22	20	10	2	2	5	4	5	12	14	9	14	18	8
Warwick.....	286	336	322	362	421	100	114	127	126	159	199	248	223	244	231	143
KENT COUNTY.	452	505	510	558	606	168	187	185	189	224	355	387	343	408	457	119
Jamesstown.....	9	9	6	2	5	.....	1	4	3	5	8	4	11	8	4	1
Little Compton.....	15	16	7	4	20	15	4	9	5	11	16	22	14	13	8	12
Middletown.....	14	29	33	29	25	2	3	6	5	5	17	21	15	22	17	8
Newport City.....	529	600	632	599	712	147	134	123	125	135	267	309	313	319	323	389
New Shoreham.....	25	36	24	16	28	6	13	13	14	7	28	16	22	21	20	8
Portsmouth.....	27	21	26	23	17	7	14	9	10	11	32	25	17	21	20	3
Tiverton.....	68	55	79	63	79	13	16	11	22	16	43	41	49	51	50	29
NEWPORT COUNTY.	687	766	807	736	886	185	190	175	184	190	411	438	441	458	442	414

TABLE XIV.—Concluded.

TOWNS AND DIVISIONS OF THE STATE.	BIRTHS.					MARRIAGES.					DEATHS.					Excess of Births over Deaths, 1889.
	1885.	1886.	1887.	1888.	1889.	1885.	1886.	1887.	1888.	1889.	1885.	1886.	1887.	1888.	1889.	
Burrillville.....	93	109	99	130	74	31	39	36	55	40	75	70	75	123	99	-25
*Cranston.....	129	136	157	142	154	26	28	34	34	42	104	83	102	100	103	51
Cumberland.....	300	211	164	208	195	58	48	72	77	89	176	189	140	177	141	54
East Providence.....	157	181	131	175	115	39	68	55	67	65	113	99	96	120	130	-15
Foster.....	16	20	20	19	23	16	11	12	9	12	29	24	33	19	25	-2
Glocester.....	47	52	43	42	54	13	14	7	10	6	30	36	39	39	41	13
Johnston.....	167	154	140	197	251	35	30	26	33	41	91	128	172	161	132	119
Lincoln.....	381	540	595	602	595	105	110	114	155	136	335	416	413	434	355	240
North Providence.....	23	29	30	35	48	5	9	7	3	2	19	17	22	38	31	17
North Smithfield.....	61	52	70	60	65	13	27	23	25	23	35	35	36	42	62	3
Pawtucket.....	530	558	620	648	655	254	253	316	300	278	434	470	553	557	524	131
PROVIDENCE CITY.....	2,936	2,960	2,963	3,053	3,173	1,091	1,249	1,284	1,349	1,367	2,164	2,253	2,640	2,641	2,516	657
Scituate.....	67	58	54	54	61	32	36	50	30	38	78	62	59	55	57	4
Smithfield.....	36	66	35	43	47	17	26	16	30	23	32	22	27	53	53	-6
Woonsocket.....	414	523	511	535	563	147	161	163	174	205	304	372	444	442	425	138
PROVIDENCE COUNTY.....	5,357	5,649	5,662	5,943	6,073	1,882	2,109	2,215	2,361	2,367	4,019	4,370	4,851	5,001	4,694	1,379
Charlestown.....	10	18	16	8	17	9	8	2	6	5	18	9	21	19	9	8
Exeter.....	13	16	13	13	8	9	10	8	18	4	19	17	18	11	21	-13
Hopkinton.....	50	45	56	47	58	22	26	44	31	39	37	50	32	50	42	16
Narragansett.....	.....	.....	.....	21	21	.....	.....	.....	8	4	.....	.....	.....	16	17	4
North Kingstown.....	70	79	82	81	67	20	21	23	27	24	52	48	80	69	64	3
South Kingstown.....	101	107	111	77	90	47	49	45	45	29	70	78	62	59	56	34
Richmond.....	42	44	36	29	47	9	8	3	6	3	23	30	33	26	27	20
Westerly.....	131	150	147	111	116	63	68	64	73	65	94	105	105	118	102	14
WASHINGTON COUNTY.....	423	459	461	389	424	179	190	189	214	173	213	337	351	368	338	86
STATE INSTITUTIONS.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	106	88	137	105	120	-120
WHOLE STATE.....	7,038	7,621	7,668	7,840	8,220	2,488	2,750	2,839	3,022	3,029	5,359	5,819	6,340	6,594	6,259	1,961

* Exclusive of deaths in State Institutions.

The variations in the number of births, marriages and deaths, in the different towns as well as in the same town, for each of the five years from 1885 to 1889, inclusive, may be readily seen in Table XIV.

In regard to the births, we note in Bristol county but a slight difference except in the town of Warren, where there was nearly twenty per cent. increase over 1888. In Kent county, West Greenwich had fifty per cent. decrease, Warwick considerable increase. The towns of Washington county seem subject to fluctuations: Westerly had the largest number of births, South Kingstown next, until the District of Narragansett was set off, when the number of births was divided between the two, the larger number falling to the former town. The cities show a constant increase in the number of births, though gradual, except Newport, where they have considerably increased.

In respect to marriages during the past five years, Bristol county shows no particular changes; if anything, there was over fifty per cent. less marriages in Barrington in the current year than in 1888. In Kent county, taken as a whole, there is observed a constant increase from year to year. In Newport county the same average is noted as in years past, though Newport city has the usual preponderance. Of all the towns and cities of Providence county, the city of Woonsocket gives the largest per cent.—a continual increase from year to year. Of all the towns of Washington county, South Kingstown, for reasons above given, alone presents any perceptible difference since 1887.

Bristol county shows a considerable diminution in deaths over last year. We can read here the effect of better health in the town of Bristol, where the falling off is particularly noticeable. In Kent county, Coventry and Warwick, chiefly the latter, show a larger percentage. There is nothing to be noted here in Newport county. In Providence county the mortality in the city of Providence was less than the previous two years, notwithstanding the increase in the population. There were slight differences in the towns of Cumberland, East Providence, Johnston, and considerable difference in Lincoln. In Washington county, Charlestown had about fifty per cent. less deaths than in all the five previous years, except in 1886. The other towns give usual variations.

The mortality for the whole State, though normally growing larger from year to year, shows a difference of 335 on the credit side, or a diminution of nearly one and a half per cent. over 1888.

TABLE XV.

Births, Marriages and Deaths in Rhode Island, in 1889, with the number of each in every 1,000 of the Population of each Town, and the Excess of the Births over the Deaths in every 1,000 of the Population.

TOWNS AND DIVISIONS OF THE STATE.	Population.	Births.	Births per 1,000 of Population.	Marriages.	Persons Married pr 1,000 of Popula- tion.	Deaths.	Deaths per 1,000 of Population.	Excess of Births over Deaths, per 1,000.
Barrington.....	1,400	25	17.9	5	7.1	21	15.0	2.9
Bristol.....	6,000	104	17.3	37	12.3	86	14.3	3.0
Warren.....	4,400	102	23.2	33	15.0	101	23.0	0.2
BRISTOL COUNTY.....	11,800	231	19.6	75	12.7	208	17.6	2.0
Coventry.....	5,000	104	20.8	23	9.2	100	20.0	0.8
East Greenwich.....	2,800	68	24.3	37	27.1	58	20.8	3.5
West Greenwich.....	850	10	11.8	5	11.8	18	21.2	-9.4
Warwick.....	14,100	424	30.1	159	22.6	281	19.9	10.2
KENT COUNTY.....	22,750	606	26.6	224	19.7	457	20.1	6.5
Jamestown.....	520	5	9.6	5	19.2	4	7.7	1.9
Little Compton.....	1,050	20	19.0	11	20.9	8	7.6	11.4
Middletown.....	1,200	25	20.7	5	8.3	17	14.1	6.6
NEWPORT CITY.....	21,266	712	33.5	135	12.7	323	15.2	18.3
New Shoreham.....	1,312	28	21.3	7	10.7	20	15.2	6.1
Portsmouth.....	2,000	17	8.5	11	11.0	20	10.0	-1.5
Tiverton.....	2,800	79	28.2	16	11.4	50	17.9	10.3
NEWPORT COUNTY.....	30,153	886	29.4	190	12.6	442	14.7	14.7
Burrillville.....	5,400	74	13.7	40	14.8	99	18.3	-4.6
Cranston.....	5,200	154	29.6	42	16.2	103	19.8	9.8
Cumberland.....	7,350	195	26.5	89	24.2	141	19.2	7.3
East Providence.....	7,900	115	14.6	65	16.4	130	16.5	-1.9
Foster.....	1,350	23	17.0	12	17.8	25	18.5	-1.5
Glocester.....	2,100	54	25.7	6	5.7	41	19.5	6.2
Johnston.....	8,750	251	28.8	41	9.5	132	15.1	13.7
Lincoln.....	21,500	595	27.7	136	12.7	355	16.5	11.2
North Providence.....	1,550	48	31.0	2	2.6	31	20.0	11.0
North Smithfield.....	3,160	65	20.6	23	14.6	62	19.6	1.0
PAWTUCKET.....	25,500	655	25.7	278	21.8	524	20.5	5.2
PROVIDENCE CITY.....	127,500	3,173	24.9	1,367	21.4	2,516	19.7	5.2
Scituate.....	3,600	61	16.9	38	21.1	57	15.8	1.1
Smithfield.....	2,500	47	18.8	23	18.4	53	21.2	-2.4
WOONSOCKET.....	21,500	563	26.2	205	19.1	425	19.8	6.4
PROVIDENCE COUNTY.....	244,860	6,073	24.8	2,367	19.3	4,694	19.2	5.6
Charlestown.....	1,050	17	16.2	5	9.5	9	8.6	7.6
Exeter.....	1,050	8	7.6	4	7.6	21	20.0	-12.4
Hopkinton.....	2,767	58	21.0	39	28.2	42	15.2	5.8
Narragansett.....	1,200	21	17.5	4	6.7	17	14.2	3.3
North Kingstown.....	3,870	67	17.3	24	12.4	64	16.5	0.8
South Kingstown.....	4,620	90	19.5	29	12.6	56	12.1	7.4
Richmond.....	1,800	47	26.1	3	3.3	27	15.0	11.1
Westerly.....	6,825	116	17.0	65	19.0	102	14.9	2.1
WASHINGTON COUNTY.....	23,182	424	18.3	173	14.9	338	14.6	3.7
STATE INSTITUTIONS.....	1,400	.....	.....	.....	.....	120	85.7	.....
WHOLE STATE.....	330,000	8,220	24.1	3,029	18.4	6,259	19.0	5.1

BIRTHS. *Proportion to Population.*

The usual varying proportions of the number of births, marriages and deaths to every 1,000 of the population in the various towns and cities, recorded in previous registration reports, will be found to have occurred in like manner in 1889.

In regard to births, the extreme range of proportion to population was from 7.6 in every 1,000, in Exeter, to 33.5 in the city of Newport. Following Newport, in the line of largest proportion, are Warwick, with 30.1, and North Providence, with 28.2. Following Exeter, in the line of the smallest proportion of births to population, are Portsmouth, with 8.5 in every 1,000, and Jamestown, with 9.6.

The proportions of births to population in all the counties entire, and in the cities of Providence, Pawtucket, Newport, Woonsocket, and the whole State, during the last six years, are as follows:

BIRTHS TO EVERY 1,000 PERSONS.

	1889.	1888.	1887.	1886.	1885.	1884.
Bristol County.....	19.6	18.1	19.6	20.9	18.4	22.9
Kent County.....	26.6	24.6	23.0	22.8	20.9	23.3
Newport County.....	29.4	24.4	20.0*	18.9*	18.1*	*19.0
Newport City.....	33.5	28.2	30.9	29.3	27.0	29.2
Providence County.....	24.8	24.9	25.0†	27.2†	22.9†	†23.8
Pawtucket City.....	25.7	25.0	25.0	22.5	23.1	24.3
Providence City.....	24.9	24.4	24.3	24.7	24.8	25.1
Woonsocket.....	26.2	26.8	28.5	27.5		
Washington County.....	18.3	16.9	20.4	20.3	18.8	18.5
Whole State.....	24.1	24.2	24.2	24.5	23.1	24.0

PERSONS MARRIED. *Proportion to Population.*

The proportion to the population, of persons married, can be more correctly shown in counties, or in cities and aggregates of towns, rather than in single towns.

The following summary will present the proportions in the manner suggested, for the last five years:

* Newport county towns.

† Providence county towns.

PERSONS MARRIED IN EVERY 1,000.

	1889.	1888.	1887.	1886.	1885.
Bristol County.....	12.7	12.5	12.8	13.6	12.2
Kent County.....	19.7	16.7	16.8	16.9	15.5
Newport County.....	12.6	12.2	11.8 ¹	11.6 ¹	9.9 ¹
Newport City.....	12.7	11.7	12.0	13.1	15.0
Providence County.....	19.3	19.8	15.4 ¹	15.9 ¹	15.6 ¹
Pawtucket.....	21.8	23.5	24.6	20.0	22.3
Providence City.....	21.4	21.6	21.0	20.8	18.5
Woonsocket.....	19.1	17.4	17.2	16.1	.....
Washington County.....	14.9	18.7	16.6	15.9	15.1
Whole State.....	18.4	18.7	18.0	17.7	16.3

DEATHS. *Proportion to Population.*

The death-rates, during 1889, varied in the different localities, as in preceding years.

The highest rate occurred in Warren, that is, about 23.0 in every 1,000 of the population; followed by Smithfield and West Greenwich with 21.2 each.

Several of the county towns had larger death-rates than either of the cities.

The lowest death-rate was in the town of Little Compton, that is, 7.6 in every 1,000 of the population, followed by Jamestown with 7.7, and Charlestown with 8.6.

The following summary will give the ratios of mortality to the population in the cities and counties of the State, during the five years ending December 31, 1889:

DEATHS IN EVERY 1,000 OF POPULATION.

	1889.	1888.	1887.	1886.	1885.
Bristol County.....	17.6	21.3	18.2	19.2	16.3
Kent County.....	20.1	18.4	15.5	17.5	16.4
City of Newport.....	15.2	15.0	15.3	15.1	13.6
Newport County.....	14.7	18.0	15.2	15.0	14.5
Pawtucket.....	20.5	21.8	22.3	19.0	19.0
City of Providence.....	19.7	21.0	21.6	19.6	18.3
Woonsocket.....	19.8	22.1	23.4	19.5	.....
Providence County.....	19.2	21.0	21.0	19.2	18.3
Washington County.....	14.6	16.0	15.5	15.0	14.1
Whole State.....	19.0	20.4	19.9	18.8	17.7

It will be noticed that the ratio of mortality to living persons was smaller, in every locality and section, in 1889, than the general average of the previous four years, excepting in Kent county.

¹ County towns.

TABLE XVI.

Proportions of Births, Marriages and Deaths to the Population, in the whole State, in each of the last twenty-one years.

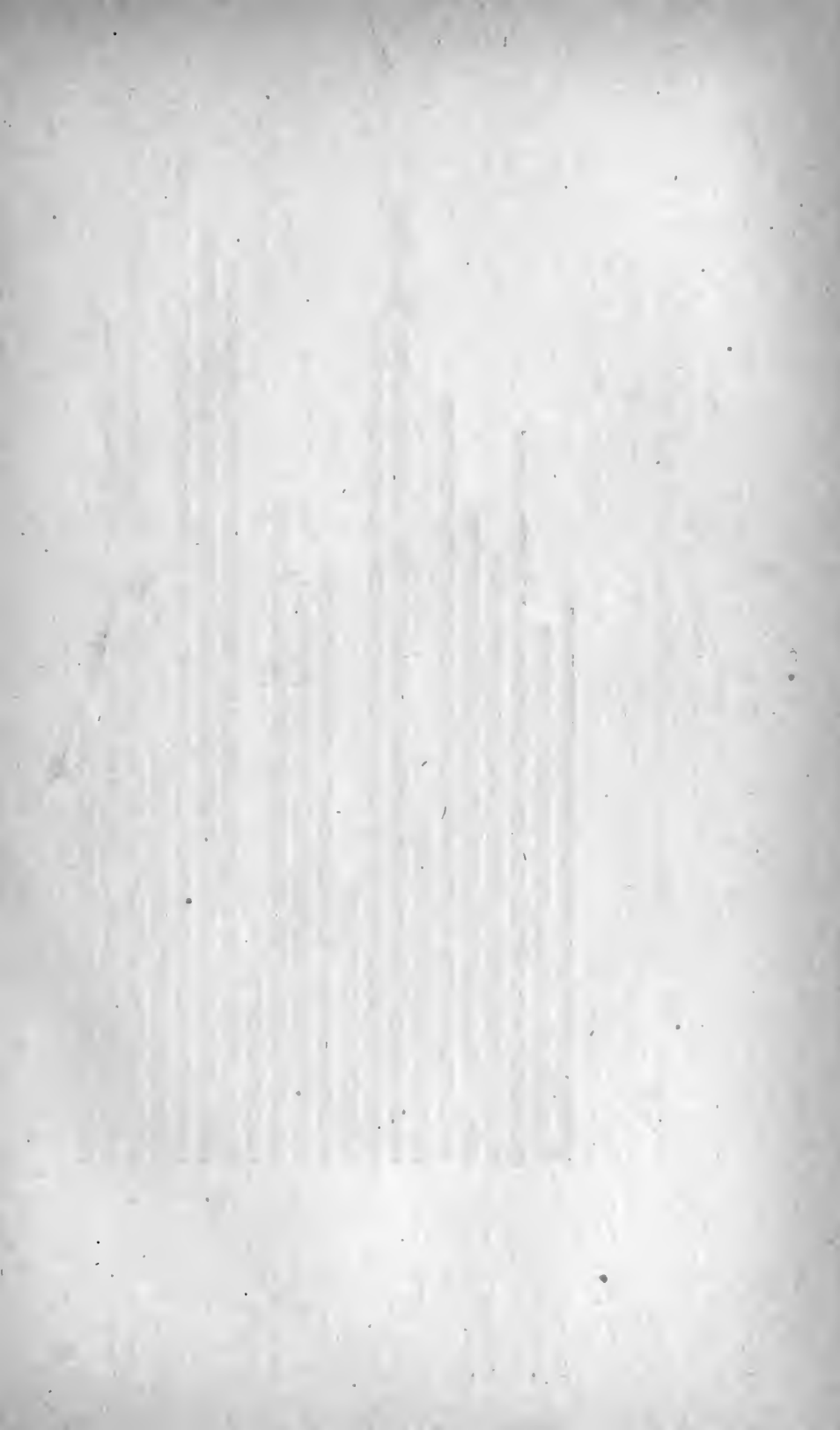
YEARS.	BIRTHS.		MARRIAGES.		DEATHS.		
	Number.	Of population one birth in every	Number.	Of population one person married in every	Number.	Of population one death in every	Deaths in every 1,000 of the population.
1869.....	5,245	41.4	2,289	47.5	3,382	64.2	15.6
1870.....	5,215	41.7	2,362	46.0	3,238	67.1	14.9
1871.....	5,678	38.2	2,336	46.5	3,444	65.0	15.4
1872.....	6,143	35.4	2,537	42.9	4,247	51.2	19.5
1873.....	6,022	36.1	2,630	41.3	4,403	49.4	20.3
1874.....	6,466	39.9	2,541	50.8	4,229	61.1	16.4
1875.....	6,508	39.7	2,485	52.0	4,317	59.8	16.7
1876.....	6,329	40.8	2,253	57.3	4,116	62.7	15.9
1877.....	6,235	41.4	2,282	56.6	4,450	58.0	17.2
1878.....	6,714	38.5	2,324	55.7	4,441	58.1	17.2
1879.....	6,350	43.6	2,396	57.8	4,472	61.9	16.0
1880.....	6,295	43.9	2,769	49.9	4,829	57.3	17.5
1881.....	6,761	40.9	2,750	50.3	5,016	55.1	18.1
1882.....	6,825	40.5	2,634	52.5	5,074	54.5	18.3
1883.....	7,046	39.2	2,611	52.9	5,282	52.4	19.1
1884.....	7,305	41.7	2,558	59.4	5,141	59.2	16.1
1885.....	7,028	43.3	2,488	61.1	5,389	56.4	17.7
1886.....	7,621	40.8	2,750	56.5	5,849	53.2	18.8
1887.....	7,668	41.3	2,839	55.8	6,340	50.0	19.9
1888.....	7,840	41.1	3,022	53.5	6,594	50.0	20.4
1889.....	8,220	40.9	3,029	55.4	6,259	52.6	19.0

It will scarcely fail to be noticed that by Table XVI it is shown that the births, in proportion to the population, have not very largely changed during the twenty-one years, while the proportion of the deaths has increased considerably.

During the first four years represented in the Table, the average birth rate was 24.0 in every 1,000 of the population; during the last four years the average birth rate was 24.2.

The death rate, during the first four of the twenty-one years, was 16.4, and during the last four it was 19.5 per 1,000 living. It should be stated, however, that the returns of death were not so complete in the earlier years shown in the Table.

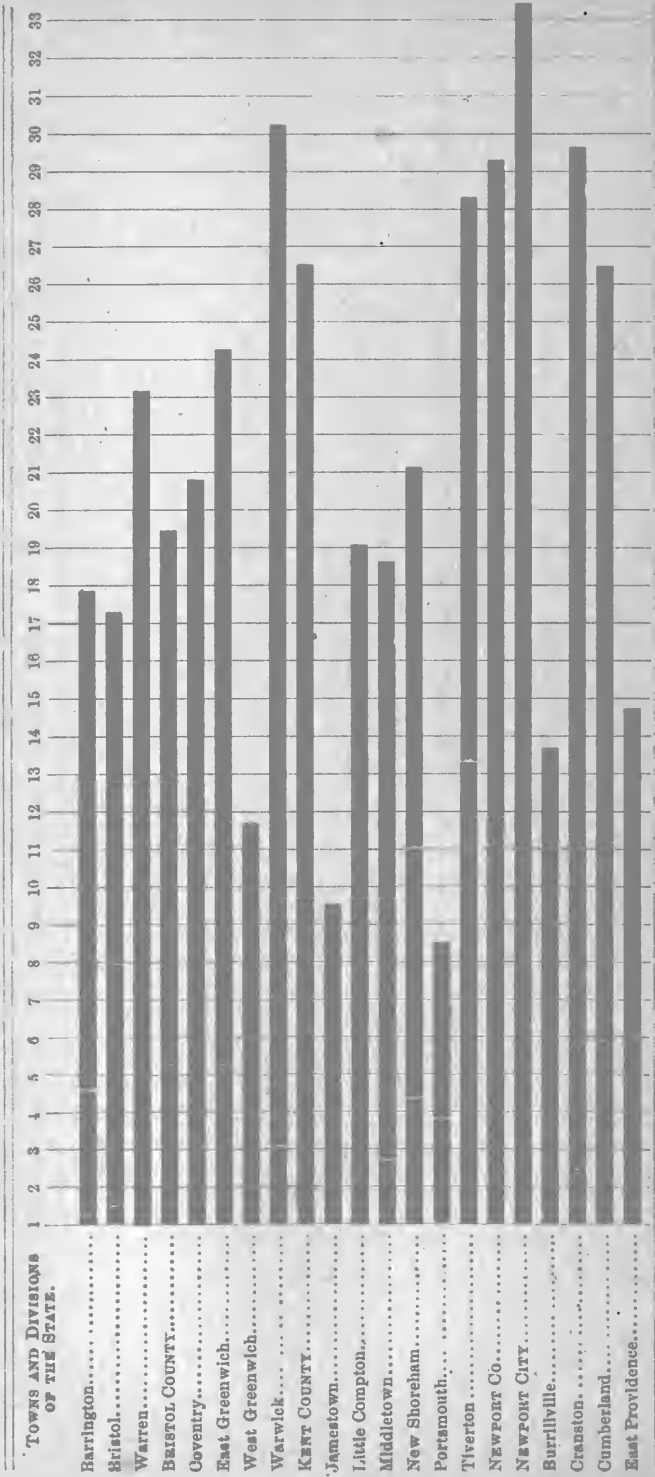


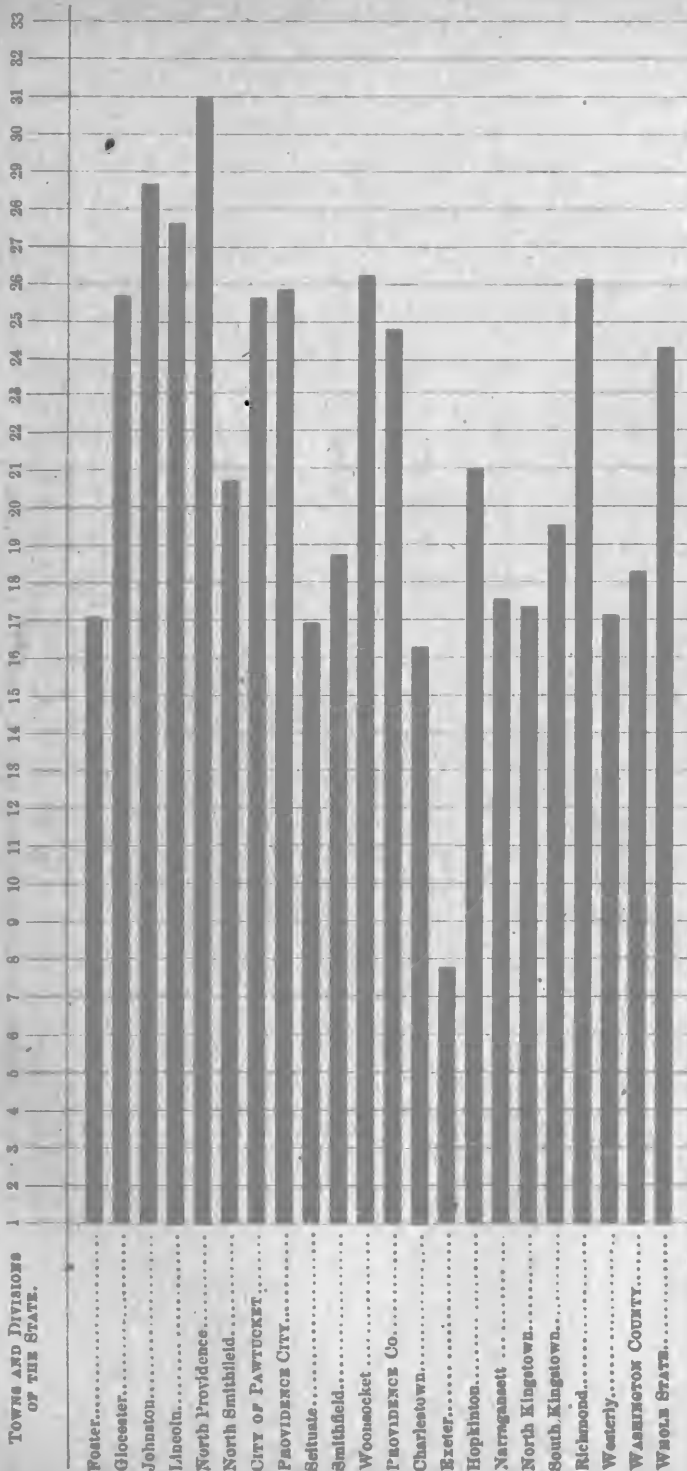


BIRTH RATES.

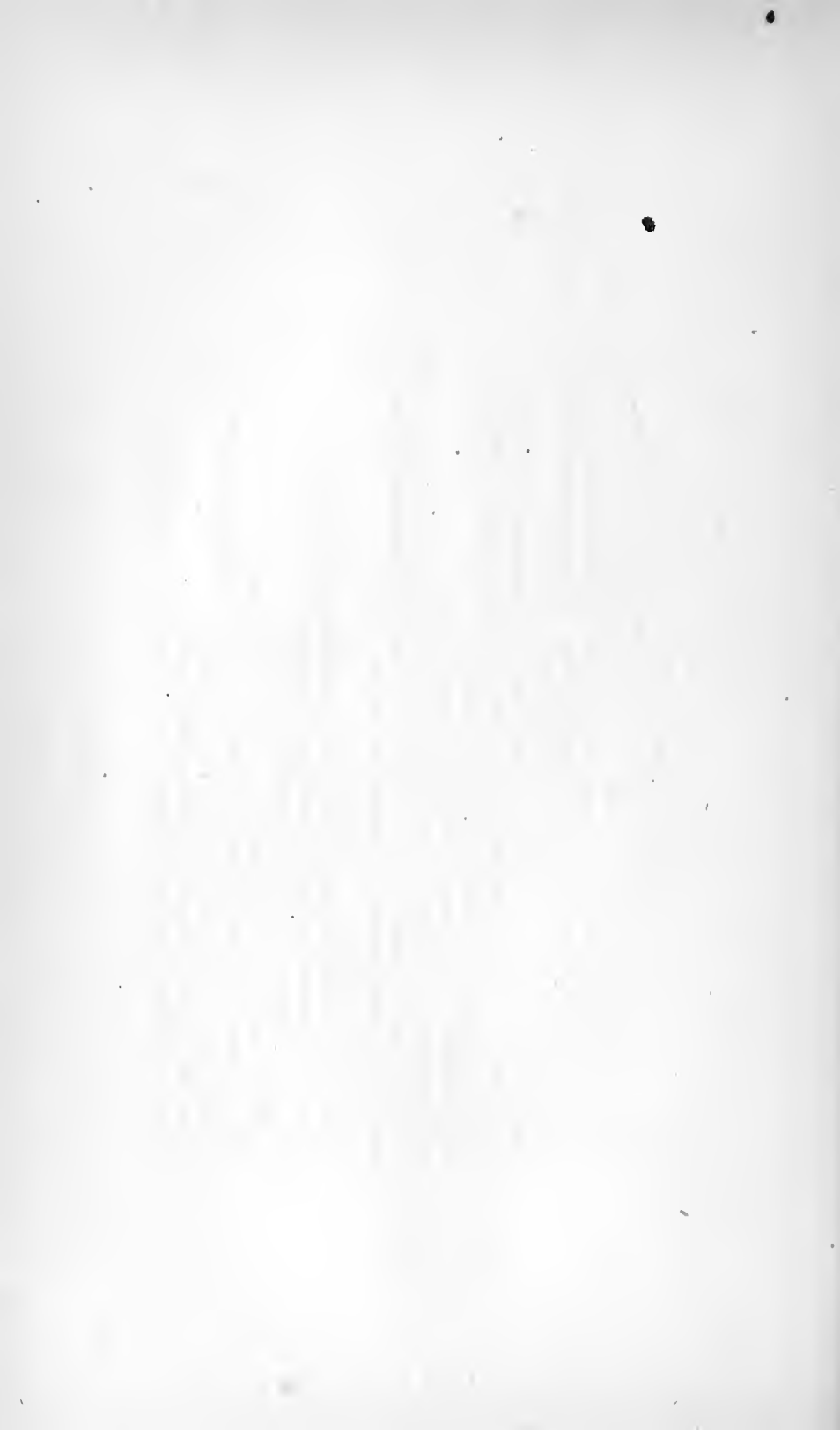
Diagram I.—Showing the number of births in every 1000 of the population, in each town and each county in the State during the year 1889, computed upon the population as estimated by the town authorities.

For explanation see foot note on next page.





The figures at the top of the perpendicular lines indicate, in whole numbers, the number of births during the year in every 1000 persons. The spaces are fractional parts of one. For instance, the heavy horizontal line against Barrington, at the top of this diagram, reaches across about nine-tenths of the space between the perpendicular lines 17 and 18. It shows the birth rate of Barrington, in 1889, was about seventeen and nine-tenths in every 1000 of the population, according to estimation.



BIRTHS, 1889.

The general statistics of births in Rhode Island, during the year 1889, derived from the returns sent to this office, may be found on pages 2 to 8, inclusive, in Tables I, II and III.

The whole number reported is 8,220, as before stated, and is 380 more than the number in 1888.

SEX OF THE CHILDREN BORN.

Of the 8,220 children whose births were reported in 1889, there were 4,193 males and 4,027 females. This gives 104.1 males to each 100 females, or 510 males and 490 females in each 1,000 children.

The following Table shows the numbers and sex, and the proportions of each sex of the children born in Rhode Island, during the ten years 1854-1863, and in each of the last twenty-six years :

TABLE XVII.

Years.	Males.	Females.	Males to each 100 Females.	Per 1,000 Births Males. Females.
1854-1863..	19,356	18,686	103.6, or.....	508.8 and 491.2
1864	1,949	1,942	100.3, or.....	500.9 and 499.1
1865	2,096	1,857	112.9, or.....	530.2 and 469.8
1866	2,546	2,356	108.0, or.....	519.4 and 480.6
1867	2,665	2,464	107.0, or.....	518.7 and 481.3
1868	2,745	2,627	104.5, or.....	511.0 and 489.0
1869	2,685	2,560	104.9, or.....	511.9 and 488.1
1870	2,679	2,536	105.6, or.....	513.7 and 486.3
1871	2,878	2,800	102.8, or.....	506.9 and 493.1
1872	3,085	3,058	109.9, or.....	502.2 and 497.8
1873	3,135	2,887	108.6, or.....	520.6 and 479.4
1874	3,311	3,155	104.9, or.....	512.1 and 487.9
1875	3,362	3,146	106.9, or.....	516.6 and 483.4
1876	3,291	3,038	108.3, or.....	520.0 and 480.0
1877	3,163	3,072	103.0, or.....	507.3 and 492.7
1878	3,402	3,312	102.7, or.....	506.7 and 493.3
1879	3,259	3,091	105.4, or.....	513.2 and 486.8
1880	3,241	3,054	106.8, or.....	514.8 and 485.2
1881	3,498	3,263	107.2, or.....	517.3 and 482.7
1882	3,509	3,316	105.8, or.....	514.1 and 485.9
1883	3,548	3,498	101.4, or.....	503.5 and 496.5
1884	3,713	3,592	103.4, or.....	508.3 and 491.7
1885	3,591	3,437	104.4, or.....	510.3 and 489.7
1886	3,897	3,724	104.6, or.....	511.3 and 488.7
1887	3,968	3,700	107.2, or.....	517.5 and 482.5
1888	4,023	3,817	105.4, or.....	513.1 and 486.9
1889	4,193	4,027	104.1, or.....	510.0 and 490.0

In no year since the commencement of registration has the number of female births equalled the number of male births.

In 1864, the number of births of each sex was, however, very nearly equal. In 1865, as if to make compensation, the number of male births exceeded the female by about sixty in every thousand.

At about five years of age the proportion of the sexes is very nearly equal, a larger number of male children dying under five years of age than of female.

PROPORTION OF THE SEXES. *Localities.*

In Table II, on pages 6 and 7, will be found the number of children born in the different divisions of the State during the year 1889, together with the number of each sex.

The following Table will give more concisely the whole number of children born, arranged according to sex and locality, and the proportion of male children to every 100 female children :

TABLE XVIII.

BIRTHS, 1889.	Bristol County.	Kent County.	Newport County.	Providence County Towns.	Washington County.	Newport City.	Pawtucket.	Providence City.	Woonsocket.	Whole State.
Males.....	104	333	459	863	222	359	330	1,598	284	4,193
Females.....	127	273	427	819	202	353	325	1,575	279	4,027
Total.	231	606	886	1,682	424	712	655	3,173	563	8,220
Males to each 100 females	81.9	122.0	107.5	105.4	110.0	100.2	101.5	101.4	101.8	104.1

There was a very considerable excess of female births in Bristol county, in 1889, a proportion of about ten per cent. In a series of twenty-seven years Bristol county has, in the aggregate, had a larger proportion of male births than any other division of the State.

In Kent county the proportion of male births was much larger than in the preceding year, and four times larger than the average of twenty-seven years.

In Newport county, in the whole, there was a preponderance of the male births of about one per cent; in Newport city, about an equal proportion.

The proportions of the sexes of the children born in Providence county towns varied but little, in 1889, from those of the last previous year.

In Providence city the sexes were nearly equal in the number of births.

The same may be said of Pawtucket and Woonsocket.

Washington county had the same excess in the proportion of male births as in the preceding year, which was larger than the average of years.

In the whole State the proportion was about the general average.

The following Table exhibits the proportions, with births of both sexes, for the past twenty-seven years, in the larger divisions of the State and in the whole State :

TABLE XIX.

NUMBER OF MALES TO EACH 100 FEMALES.

BIRTHS.	Bristol County.	Kent County.	Newport County.	Providence County Towns.*	Providence City.	Washington County.	Whole State.
1863.. .. .	120.0	98.4	97.0	101.8	111.4	108.7	105.8
1864.. .. .	106.8	87.3	90.6	107.4	97.3	103.4	100.3
1865.. .. .	119.3	118.2	103.8	118.8	113.8	88.1	112.9
1866.. .. .	109.4	113.1	103.4	104.9	108.4	124.0	108.0
1867.. .. .	115.5	98.3	117.8	106.3	104.5	120.4	107.7
1868.. .. .	117.4	88.7	100.2	101.6	102.4	136.5	104.5
1869.. .. .	115.7	116.7	102.7	98.0	107.5	120.6	104.9
1870.. .. .	126.4	111.6	106.0	105.1	104.9	99.5	105.6
1871.. .. .	131.8	97.9	132.5	100.8	95.2	113.3	102.8
1872.. .. .	109.2	92.8	109.1	103.5	95.7	110.6	100.9
1873.. .. .	129.2	113.0	117.9	104.5	109.0	101.7	108.6
1874.. .. .	98.7	111.9	101.3	110.4	102.9	94.0	104.9
1875.. .. .	95.2	103.1	97.7	104.3	109.1	131.3	106.9
1876.. .. .	142.1	104.4	108.5	108.0	106.8	103.7	108.3
1877.. .. .	138.7	102.4	98.5	100.3	104.9	95.3	103.0
1878.. .. .	120.5	120.6	94.8	101.5	106.8	78.8	102.7
1879.. .. .	124.3	95.5	103.6	105.4	105.7	106.3	105.4
1880.. .. .	117.2	110.5	113.0	102.4	107.6	95.4	106.1
1881.. .. .	91.2	111.3	102.0	105.9	109.0	115.7	107.2
1882.. .. .	94.7	110.2	112.5	103.1	106.5	105.7	105.8
1883.. .. .	94.0	97.6	97.0	103.5	102.2	102.2	101.4
1884.. .. .	105.0	111.7	92.9	102.5	105.8	99.0	103.4
1885.. .. .	132.2	107.3	98.0	104.8	103.6	101.3	104.4
1886.. .. .	120.0	81.7	102.6	106.7	105.0	121.7	104.6
1887.. .. .	115.1	121.7	106.6	103.9	107.9	106.7	107.2
1888.. .. .	98.1	105.1	105.0	103.4	107.4	110.2	105.4
1889.. .. .	81.9	122.0	107.5	103.6	101.4	110.2	104.1

* Including cities of Pawtucket and Woonsocket.

The following summary will show in the aggregate the average number of males to each 100 females, born during the twenty-seven years from 1863 to 1889, in the different divisions of the State :

Bristol County.....	113.5 males to each 100 females.
Kent County.....	106.4 males to each 100 females.
Newport County.	105.4 males to each 100 females.
Providence County towns ¹	104.9 males to each 100 females.
Providence City.....	105.2 males to each 100 females.
Washington County.....	106.8 males to each 100 females.
Whole State.....	104.1 males to each 100 females.

BIRTHS AND SEASON.

Table II, on pages 6 and 7 of this report, gives the number of births occurring in the different months of the year, in the several divisions of the State.

According to this Table, the greatest number of births in any one month, in 1889, occurred in December, and the largest in any quarter in the third ; a fact not invariably observed in this part of the year.

The following Table shows the total number of children born in the State of Rhode Island, according to the returns, in each quarter of each of the last six years ; and also the aggregate number and the percentage of the aggregate of each quarter in thirty-five years, from 1854 to 1888, inclusive :

TABLE XX.

QUARTERS.	1889.	1888.	1887.	1886.	1885.	1884.	1854 to 1887, inclusive.	
							Number.	Per cent.
January—March.....	1,864	1,862	1,828	1,763	1,669	1,734	45,560	23.66
April—June.....	2,024	1,833	1,859	1,749	1,736	1,755	45,491	23.62
July—September.	2,160	2,034	1,956	2,041	1,768	1,868	50,906	26.12
October—December.....	2,172	2,061	2,025	2,068	1,885	1,948	51,227	26.60
Whole Year.....	8,220	7,840	7,668	7,621	7,028	7,305	192,584	100.00

By the above Table it will be seen that, according to the registration of thirty-six years, the average proportions of births to the whole number of births, in the different quarters of the year, were as follows :

¹ Including Pawtucket and Woonsocket.

January—March.....	236.6 in every 1,000 births.
April—June.....	236.2 in every 1,000 births.
July—September.....	261.2 in every 1,000 births.
October—December.....	266.0 in every 1,000 births.

The proportions of births in Rhode Island, in the different quarters of the year, to the whole number of births in 1889, were as follows :

1. January—March.....	22.7 per cent., or.....	227 in every 1,000
2. April—June.....	24.6 per cent., or.....	246 in every 1,000
3. July—September.....	26.3 per cent., or.....	263 in every 1,000
4. October—December.....	26.4 per cent., or.....	264 in every 1,000
	100.0	1,000

First six months.....	473 births in every one thousand.
Second six months.....	527 births in every one thousand.

BIRTHS. *Sex and Season.*

In Table II, on pages 6 and 7, will also be found the number of births of *each sex* by months, as they occurred in the different divisions of the State, during the year 1889. From it we ascertain the number of *each of the sexes* born during each quarter of the year, with their relative proportions, and also the aggregates and proportions of the same for the whole State.

The following Table will present a summary of the quarterly periods, number of births and proportions of the sexes, for the same year :

	Per 1,000,		Males to each 100 Females.	each quarter.	
	Males.	Females.		Males.	Females.
1. January—March.....	958.....	906.....	105.7, or.....	514.....	486
2. April—June.....	998.....	1,026.....	97.3, or.....	493.....	507
3. July—September.....	1,102.....	1,058.....	104.1, or.....	510.....	490
4. October—December.....	1,135.....	1,037.....	109.4, or.....	522.....	478
Whole year, 1889.....	4,193.....	4,027.....	104.1, or.....	510.....	490

The following Table shows the number of male children born to every 100 female children, in each quarter of the last four years ; and also the proportion of births of male children to each 100 female children born, during four periods of five years each, from 1866 to 1885, inclusive :

TABLE XXI.

YEARS.	1889.	1888.	1887.	1886.	5 years. 1881-1885.	5 years. 1876-1880.	5 years. 1871-1875.	5 years. 1866-1870.
First Quarter	105.7	103.3	100.2	103.8	105.8	106.0	101.5	106.7
Second Quarter.....	97.3	109.0	110.3	103.8	104.8	102.7	104.7	107.3
Third Quarter.....	104.1	106.5	108.8	103.5	105.1	107.1	104.8	106.0
Fourth Quarter.....	109.4	103.1	109.6	107.2	103.5	108.2	106.5	104.8
Total average.....	104.1	105.4	107.2	104.6	104.5	106.2	104.2	106.2

The irregularity in the variation of the proportions of the sexes in the different quarters, and months even, in the different years, seems to conclusively determine that season has very little, if any, influence in the causation of sex.

PARENTAGE.

By reference to Table I, page 4, in the division of births there will be found the parentage of the children born in Rhode Island, during the year 1889. It will be seen that of the whole number—8,220—there were 3,020 of native parentage, 3,656 foreign, and 1,544 of mixed parentage.

By mixed parentage is meant the children born of native fathers and foreign mothers, and of foreign fathers and native mothers.

Of native born fathers there were 741, and of foreign born fathers 803.

The following Table will show the number and parentage of the children born in the State, and the variations of the same from year to year, in each of the last three years; and also the number and variations occurring in six periods of five years each, from 1858 to 1887, inclusive:

TABLE XXII.

PARENTAGE.	1889.	1888.	1887.	5 years, 1883 to 1887.	5 years, 1878 to 1882.	5 years, 1873 to 1877.	5 years, 1868 to 1872.	5 years, 1863 to 1867.	5 years, 1858 to 1862.
Native fath. and mo	3,020	3,028	2,935	15,001	14,169	13,431	12,214	9,712	10,609
Foreign fath and mo.....	3,656	3,348	3,315	15,245	13,562	13,990	12,366	9,968	9,697
Native fath., foreign mo..	741	721	672	3,044	2,327	1,782	1,353	876	814
Foreign fath., native mo..	803	743	746	3,378	2,887	2,357	1,720	941	755
Parentage not stated								70	223
Total	8,220	7,840	7,668	36,668	34,945	31,560	27,653	21,567	22,098

The following Table of *percentages* will show, in a different and perhaps clearer way, the same changes that have occurred in the proportions of the births in the different classes of parentage during the last three years; and during thirty years, from 1858 to 1887, inclusive, in six equal periods:

TABLE XXIII.

PARENTAGE.	1889.	1888.	1887.	5 years, 1883 to 1887.	5 years, 1878 to 1882.	5 years, 1873 to 1877.	5 years, 1868 to 1872.	5 years, 1863 to 1867.	5 years, 1858 to 1862.
Native fath. and mo.	36.74	35.62	38.28	40.91	43.03	42.55	44.17	45.18	48.50
Foreign fath. and mo.	44.47	42.70	43.23	41.58	41.23	44.35	44.72	46.37	44.33
Native fath., foreign mo..	9.02	9.20	8.76	8.30	6.95	5.84	4.89	4.07	3.72
Foreign fath., native mo..	9.77	9.48	9.73	9.21	8.79	7.26	6.22	4.38	3.45
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

An examination of Table XXIII will show that there has been a constant increase in the proportion of children of foreign parentage. The same may be said relative to the offspring of mixed marriages. More than 63 per cent. of the children born in this State during 1889 were of foreign and mixed parentage.

The following Table will present the percentages of children of native and of foreign-born fathers, and of native and foreign-born mothers, respectively, in each of the last three years, and in each of six periods of five years each, from 1858 to 1887, inclusive:

TABLE XXIV.

CHILDREN WITH	1889.	1888.	1887.	5 years, 1883 to 1887.	5 years, 1878 to 1882.	5 years, 1873 to 1877.	5 years, 1868 to 1872.	5 years, 1863 to 1867.	5 years, 1858 to 1862.
Native fathers.....	45.76	47.82	47.04	49.21	50.08	48.40	49.06	49.25	52.22
Foreign fathers.....	54.24	52.18	52.96	51.79	49.92	51.60	50.94	50.75	47.78
Native mothers.....	46.50	48.10	48.01	49.91	51.79	49.80	50.39	49.56	51.95
Foreign mothers.....	53.50	51.90	51.99	50.09	48.21	50.20	49.61	50.44	48.05

The above Table gives the percentages of increase in the births of both foreign and mixed parentage. The same story is told here as in Tables XXII and XXIII, a gradual falling off in the birth of children

of purely native parentage. There are more foreign mothers married to native fathers than native born mothers intermarrying with fathers of foreign parentage.

Of the children born in 1889, there were 698 more of foreign fathers than of native fathers, and 574 more of foreign mothers than of native mothers.

BIRTHS OF COLORED CHILDREN.

The number of births of children of colored parentage reported for the year 1889 is 194. The number is 8 less than that of 1888.

In regard to sex, the numbers and proportions were as follows, viz.: Males, 87, females, 107; or 44.8 males and 55.2 females in every 100 births; or 81.3 males to each 100 females.

The following summary will show the changes that have occurred from year to year, in the proportions of the sexes of colored children born in Rhode Island, during the last fourteen years:

Years.	Whole Number.	Males.	Females.	Males to each 100 females.
1876-1885.....	1,762.....	849.....	913.....	93.0
1886.....	212.....	117.....	95.....	123.0
1887.....	211.....	111.....	100.....	111 0
1888.....	202.....	109.....	93.....	117.2
1889.....	194.....	87.....	107.....	81.3

The following Table will show the location, number, sex, etc., of colored births during 1889:

TABLE XXV.

Showing Number, Sex, etc., of Colored Births, 1889.

TOWNS.	Whole Number.	Males.	Females.	COUNTIES.
Coventry.....	1	1	Kent County.....13
East Greenwich.....	9	3	6	
Warwick.....	3	.....	3
New Shoreham.....	1	1	Newport County..... 54
Newport City	53	24	29	
Cranston.....	1	1	.....
East Providence	1	1	Providence County.....114
Lincoln.....	1	.....	1
Pawtucket.....	2	1	1	
Providence City.....	109	47	62	
Charlestown.....	2	2	.....
Hopkinton.....	1	1	.....
Narragansett.....	2	1	1	Washington County.... 13
South Kingstown	5	4	1	
Richmond.....	1	.....	1
Westerly.....	2	2	.....
Whole State.....	194	87	107194

NUMBER OF CHILD OF THE MOTHER.

The following Table shows the number of the child of the mother; that is, how many of the children born were reported as the first, second or third child, etc., of their respective mothers. The statistics on this subject begin with the year 1857, and the following Table includes the children reported during the last six years, and also the total for thirty years, 1857 to 1886, inclusive:

TABLE XXVI.

NUMBER OF THE CHILD OF THE MOTHER.	1884.	1885.	1886.	1887.	1888.	1889.	30 years, 1857-1886.
First	1,847	1,663	1,783	1,853	1,998	2,082	40,496
Second.....	1,356	1,362	1,559	1,483	1,545	1,545	32,941
Third.....	1,087	1,033	1,144	1,146	1,182	1,209	25,747
Fourth.....	777	767	795	918	884	923	19,389
Fifth.....	643	597	660	585	609	725	14,633
Sixth.....	472	498	481	475	475	503	10,704
Seventh.....	374	345	359	375	329	370	7,623
Eighth.....	269	282	287	289	281	278	5,324
Ninth.....	187	168	202	198	185	207	3,521
Tenth.....	103	134	131	143	141	162	2,278
Eleventh.....	81	73	87	78	83	96	1,345
Twelfth.....	49	57	55	65	50	47	850
Thirteenth.....	32	27	39	32	38	29	459
Fourteenth.....	16	11	19	15	21	23	218
Fifteenth.....	5	7	10	6	9	12	122
Sixteenth.....	0	1	7	3	4	2	63
Seventeenth.....	4	1	2	3	2	3	42
Eighteenth.....	2	1	1	0	3	3	14
Nineteenth.....	0	1	0	0	1	1	6
Twentieth.....	1	0	0	1	0	0	4
Twenty-first.....	0	0	0	0	0	0	3
Twenty-Second..	0	0	0	0	0	0	2
Total.....	7,305	7,028	7,621	7,668	7,840	8,220	165,784

The increase in the whole number of births in 1889, over the previous year, was 380, or four and eight-tenths per cent. The increase of population was probably not as much.

The increase in number in the class of first child of the mother was about four per cent., also there was an increase in the classes of the third to the seventh child of the mother.

It is not unusual to find varying proportions from year to year.

The proportion of each class to the whole number will be shown by the following Table, which gives the percentage of the children born in each of the last five years, who were respectively the first, second,

third, etc., children of the mothers, and which will also give the average percentage of each class of births, during a period of ten years, from 1868 to 1877, inclusive, and of five years, 1878 to 1882, and from 1883 to 1887, inclusive :

TABLE XXVII.

NUMBER OF THE CHILD.	1889.	1888.	1887.	1886.	1885.	5 years, 1883 to 1887.	5 years, 1878 to 1882.	10 years, 1868 to 1877.
First.....	25.33	25.49	24.16	23.40	23.66	24.30	23.1	25.2
Second.....	18.80	19.71	19.34	20.45	19.38	19.22	18.7	20.7
Third.....	14.70	15.08	14.94	15.01	14.70	14.82	16.9	15.5
Fourth.....	11.23	11.28	11.84	10.43	10.91	11.05	12.2	11.4
Fifth.....	8.82	7.77	7.63	8.66	8.49	8.56	9.1	8.4
First to Fifth	78.88	79.33	77.91	77.95	77.14	77.80	80.0	81.1
Sixth and over.....	21.12	20.67	22.09	22.05	22.86	22.20	20.0	18.9
Total.....	100.00	100.00	100.00	100.00	100.00	100.00	100.0	100.0

PLURALITY BIRTHS.

The general statistics in relation to plural births, in Rhode Island, may be found on page 8, in Table III.

There were ninety-nine cases during the year, all of which were twins, thus making the number of one hundred and ninety-eight children.

Of the 198 children of plural birth, 105 were males, and 93 were females.

The cases occurred in the different divisions of the State as follows : Bristol county, 2 ; Kent county, 7 ; Newport county towns, 3 ; Newport city, 15 ; Providence county towns, 28* ; Providence city, 39 ; Washington county, 5.

The following exhibit will show the parentage of children of plural birth in Rhode Island, in 1889, and number of each :

* Including Pawtucket and Woonsocket.

		CASES
Parents, both native Americans, or both born in the United States.....	32	
“ “ born in Ireland.....	16	
“ “ “ France, or French Canadians.....	10	
“ “ “ England.....	10	
“ “ “ Scotch.....	3	
“ “ “ Italy.....	3	
“ “ “ Germany.....	1	
“ “ “ Sweden.....	1	
Native father and Irish mother.....	6	
Native father and English mother.....	2	
Native father and French mother.....	1	
French father and native mother.....	1	
Irish father and native mother.....	5	
Irish father and English mother.....	1	
English father and Scotch mother.....	1	
English father and native mother.....	1	
Scotch father and English mother.....	1	
Other mixed nationalities.....	4	
Total children.....		198

The months in which the plurality births occurred were as follows :

January..... 12	April.....16	July..... 22	October.....18
February.....12	May.....18	August.....18	November. ....14
March..... . 16	June.....12	September.....18	December 22
—	—	—	—
First Quarter .....40	Second Quarter ..46	Third quarter.....58	Fourth Quarter ....54
First half of year..... 86		Second half of year.....112	
Total.....198			

The general statistics of births, and number of *cases* reported in Rhode Island during a period of thirty-six years, that is, from 1854 to 1889, inclusive, are as follows :

196,515 cases of single births.....	giving 196,515 children.
2,111 cases of twin births.....	giving 4,222 children.
21 cases of triple births.....	giving 63 children.
1 case of quadruple births.....	giving 4 children.
<hr/>	
198,648 cases of child birth.....	giving 200,804 children.

Of the whole number of *cases* of child-birth (198,648) during the thirty-six years, one in 95 produced twins, one in 9,460 produced triplets, and one in 198,648 produced quadruplets.

Of the whole number of children born during the same period, (200,804), ascertained from the reports, one in every 47.5 was a twin, and one in every 3,187 was a triplet.

Of the 2,111 *cases* of plurality birth which have occurred in the State during the last thirty-six years, there were 877 cases in which both parents were natives; 1,002 cases in which both parents were foreign; 246 cases in which the parentage was mixed, that is, one native and one foreign parent; and 8 in which the parentage was not stated.

The whole number of children born in plurality cases, during the thirty-six years, was 4,289, of whom 2,158 were males, and 2,127 were females; the sex of the remaining four was not given.

STILL-BORN.

The whole number of still-born children reported in Rhode Island, for the year 1889, was 329; this number is 34 more than that for the year 1888.

The following are the numbers reported from the different divisions of the State:

Bristol County.....	12
Kent County.....	18
Newport County Towns...	3
Newport City.....	26
Providence County Towns....	46
Pawtucket.....	25
Providence City.....	164
Woonsocket.....	28
Washington County.....	7
<hr/>	
Whole State.....	329

The following Table will give the number in each town from which still-births were reported; with the sex, parentage and color:

TABLE XXVIII.

Still-Born, 1889, Locality, Number, Sex, Parentage and Color.

TOWNS AND DIVISIONS OF THE STATE.	Whole Number.	SEX.		PARENTAGE.		COLOR.	
		Males.	Females.	Native.	Foreign.	White.	Colored.
Bristol.....	7	3	4	2	5	7	.....
Warren.....	5	3	2	3	2	4	1
BRISTOL COUNTY.....	12	6	6	5	7	11	1
Coventry.....	4	4	.....	4	.....	4	.....
East Greenwich.....	2	.....	2	1	1	1	1
Warwick.....	12	4	8	2	10	12	.....
KENT COUNTY.....	18	8	10	7	11	17	1
Newport City.....	26	17	9	11	15	25	1
Tiverton.....	3	3	.....	2	1	3	.....
NEWPORT COUNTY.....	29	20	9	13	16	28	1
Burrillville.....	6	4	2	3	3	6	.....
Cranston.....	4	3	1	3	1	4	.....
Cumberland.....	6	3	3	2	4	6	.....
East Providence.....	9	5	4	7	2	9	.....
Johnston.....	5	3	2	.....	5	5	.....
Lincoln.....	15	7	8	4	11	15	.....
Pawtucket.....	25	16	9	11	14	25	.....
Providence City.....	164	89	75	88	76	158	6
Scituate.....	1	1	.....	1	.....	1	1
Woonsocket.....	28	16	12	7	21	28	.....
PROVIDENCE COUNTY.....	263	147	116	126	137	256	7
North Kingstown.....	4	3	1	3	1	4	.....
South Kingstown.....	1	1	...	1	.....	1	.....
Westerly.....	2	1	1	.....	2	2	.....
WASHINGTON COUNTY.....	7	5	2	4	3	7	.....
WHOLE STATE.....	329	186	143	155	174	319	10

SUMMARY OF SEX OF STILL-BORN.

The following Table shows the number and sex of the still-born children whose births were reported in Rhode Island, during each of the last five years, and also of a period of thirty-two years, extending from January 1, 1854, to December 31, 1885 :

TABLE XXIX.

SEX.	1889.	1888.	1887.	1886.	1885.	January 1, 1854, to Dec. 31, 1885.
Males.....	186	164	169	157	149	3,824
Females.....	143	131	107	136	122	2,674
Total.....	329	295	276	293	271	6,498

The average proportions of the sexes of the still-born, for the period of thirty-two years, were as follows: In every 100 still-births there were about 59 males and 41 females.

Season of Still-Births.—During the thirty-two years included in Table XXIX, the proportions in relation to season, by percentage, were as follows :

First Quarter.....	24.82	Third Quarter.....	26.82
Second Quarter.....	23.16	Fourth Quarter.....	25.20
Per cent. first half of the year.....	47.98	Last half of the year.....	52.02

The births of the still-born in the different months of the year, although somewhat variable in number, do not show great discrepancies.

PARENTAGE OF THE STILL-BORN.

Of the 329 still-born children reported in 1889, there were 155 of native, and 174 of foreign parentage, reckoned by the nativity of the fathers, that is, the father's name given; and 166 of native and 163 of foreign, reckoned by the nativity of the mothers.

To show the changes that have occurred, from year to year, in the percentages of parentage of *the still-born*, reckoning by the parentage

of the mothers, in contrast with the percentages of the same nativities to the *whole number of births*, reckoned by the parentage of the father, the following resumé, for various years and periods of years, is presented :

Years.	Of Whole Number Births.		Of Whole Number Still-Born.	
	Native.	Foreign.	Native.	Foreign.
14 years, 1859-1872.....	50.54	49.46	51.84	48.16
in each 100....				
10 years, 1873-1882.....	49.10	50.90	51.84	48.16
in each 100....				
1883.....	49.94	50.06	50.98	49.02
1884.....	49.91	50.09	49.63	50.37
1885.....	49.76	50.24	48.00	52.00
1886.....	49.74	50.26	47.44	52.56
1887.....	47.04	52.96	49.63	50.37
1888.....	47.82	52.18	48.47	51.53
1889.....	45.75	54.25	46.51	53.49
in each 100....				

The above, however, does not show the actual relative ability of the two classes to carry children *in utero* through to the full term of gestation, with full viability at birth.

That can better be shown by ascertaining the proportion of the still-born to the whole number of births of each class of mothers.

In the class of native parentage (that is, natives of the United States, although a large proportion of those reckoned as native are the children of foreign born parents), the ratio was 4.3 in every one hundred births, and in the class of foreign parentage the ratio was 3.7 in every one hundred.

ILLEGITIMATES.

The following Table will exhibit the number, sex, color, parentage and locality of birth of illegitimates in Rhode Island, in 1889 :

TABLE XXX.
Illegitimates, 1889.

TOWNS.	Whole Number.	SEX.		COLOR.		PARENTAGE.		Alms-houses or Penal Institutions.
		Males.	Females.	White.	Black.	Native.	Foreign.	
East Greenwich.....	1	.....	1	.....	1	1	.....	.....
West Greenwich.....	1	1	.....	1	.....	1	.....	.....
Warwick.....	2	1	1	1	1	1	1	.....
Portsmouth.....	1	.....	1	1	.....	1	.....	.....
Tiverton.....	2	2	.....	2	.....	2	.....	.....
Newport City.....	7	1	6	3	4	6	1	2
Burrillville.....	2	2	.....	2	.....	2	.....	.....
Cranston.....	3	2	1	3	.....	1	2	2
Lincoln.....	2	.....	2	1	1	2	.....	.....
Pawtucket.....	1	1	.....	1	.....	1	.....	.....
Providence City.....	28	15	13	22	6	18	10	8
Scituate.....	1	1	.....	1	.....	1	.....	.....
Woonsocket.....	10	4	6	10	.....	5	5	.....
Charlestown.....	1	.....	1	1	.....	1	.....	.....
Hopkinton.....	1	1	.....	1	.....	1	.....	.....
Whole State.....	63	31	32	50	13	44	19	12

There were returns, during 1889, of 63 children of illegitimate parentage. The number is one less than that of 1888.

Sex.—Of the 63 there were 31 males and 32 females.

The proportions of the sexes were nearly equal.

Color.—Of the 63 illegitimates born during 1889, 50 were white, and 13 colored.

Parentage.—Of the 63, 44 were born of native mothers and 19 of foreign born mothers. The colored illegitimates were of native parentage. There were, of the 50 white illegitimates, 31 born of native mothers, and 19 of foreign born mothers.

The parentage given is of native born and foreign born, that is, mothers born in the United States of foreign born parents are reckoned as of native parentage.

Twelve of the illegitimates were born of pauper or criminal mothers, in public, charitable or penal institutions.

The proportion of illegitimates to the whole number of births was about one in every 130 cases, or 7.5 in every 1,000 births.

MARRIAGES, 1889.

The number of marriages registered in Rhode Island, during the year 1889, was 3,029. This number is 190 more than in 1887, and only 7 more than in 1888.

The general statistics of marriage in 1889, in relation to season and number in the different divisions of the State, may be found in Table IV, on the ninth page.

The statistics in relation to the proportion to population of persons married in 1889, in each of the towns and general divisions of the State, may be found in Tables XV and XVI, on pages 100 and 103.

The following Table will present the number of marriages, and the ratio of marriage to population, in each year for a period of thirty years, 1860 to 1889, inclusive:

TABLE XXXI.

YEARS.	Number Marriages.	Of population, one person married in every	Persons married per 1,000 of population.	YEARS.	Number Marriages.	Of population, one person married in every	Persons married per 1,000 of population.
1860.....	1,748	50.0	20.0	1876.....	2,253	57.3	17.5
1861.....	1,533	56.8	17.6	1877.....	2,282	56.6	17.7
1862.....	1,450	61.1	15.1	1878.....	2,324	55.7	17.9
1863.....	1,618	54.7	18.3	1879.....	2,396	57.8	17.5
1864.....	1,844	50.1	19.9	1880.....	2,769	49.9	20.0
1865.....	1,896	48.7	20.5	1881.....	2,750	50.3	19.9
1866.....	2,318	39.9	25.1	1882.....	2,634	52.5	19.0
1867.....	2,344	39.8	25.1	1883.....	2,611	54.4	18.3
1868.....	2,285	40.5	24.8	1884.....	2,558	58.1	17.2
1869.....	2,289	47.5	21.1	1885.....	2,488	61.3	16.3
1870.....	2,362	46.0	21.7	1886.....	2,750	56.5	17.7
1871.....	2,336	46.5	21.5	1887.....	2,839	55.8	18.0
1872.....	2,537	42.9	23.2	1888.....	3,022	53.5	18.7
1873.....	2,630	41.3	24.2	1889.....	3,029	57.8	17.3
1874.....	2,541	50.8	19.6	Annual Average...		51.5	19.4
1875.....	2,485	52.0	19.2				

SEASON.

The following Table will show the number and percentage of marriages in Rhode Island, in each month and each quarter of the year 1889, together with the aggregate number and percentage in each quarter for thirty-five years, viz., from 1854 to 1888, inclusive:

TABLE XXXII.

MONTHS.	Number of Marriages each Month.	Number of Marriages each Quarter, 1889.	Percentage of each Quar. to total Marriages, 1889.	Number of Marriages per Quarter, 35 yrs., 1854-1888.	Percentage each Quarter, 35 years.
January.....	261	1st Quarter... 675	22.28	1st Quarter... 16,852	22.03
February.....	220				
March.....	194				
April.....	243	2d Quarter... 763	25.19	2d Quarter... 19,025	24.88
May.....	230				
June.....	290				
July.....	203	3d Quarter... 714	23.57	3d Quarter... 17,897	23.39
August.....	240				
September.....	271				
October.....	331	4th Quarter.. 877	28.96	4th Quarter... 22,691	29.70
November.....	345				
December.....	201				
Total.....		3,029	100.00	*76,485	100.00

The largest number of marriages, in any one month during 1889, occurred in the month of November. This is in accordance with the rule for thirty-five years.

There was an agreement with the rule, also, in the proportions of the number of marriages, in the different quarters of the year, to the whole number during the year. The rule has been as follows: The largest proportion in the last quarter; the next largest in the second quarter; followed by the third quarter; and, finally, the first quarter having the smallest proportion.

During 1889 the proportions in the different quarters, from the largest to the smallest, were as follows: Last quarter, 28.96 per cent.; second quarter, 25.19 per cent.; third quarter, 23.57 per cent.; first quarter, 22.28 per cent.

NATIVITY OF PERSONS MARRIED.

The following table shows the *number* of marriages, according to the nativities of the parties, for each of the last five years, and also

* Including 20, date not given, recorded previous to 1860.

for the aggregate of five years, from 1883 to 1887, inclusive, and of twenty-five years, from 1858 to 1882, inclusive:

TABLE XXXIII.

BIRTH-PLACE.	1889.	1888.	1887.	1886.	1885.	5 years, 1883-1887. Total.	25 years, 1858-1882. Total.
United States.....	1,539	1,496	1,465	1,480	1,374	7,157	33,553
Foreign countries.....	908	935	808	739	677	3,601	13,753
Native groom, foreign bride.....	274	329	303	290	236	1,323	3,498
Foreign groom, native bride.	308	262	263	241	201	1,165	3,876
Not stated.....							64
Total.....	3,029	3,022	2,839	2,750	2,488	13,246	54,734

It will be understood that in the above enumeration the *parent nativity* of the persons married is not considered, but the country where born.

Parties born in the United States, although children of foreign born parents, are reckoned as natives.

In the following Table are given the *percentages* by birth, of native, foreign and mixed marriages, in each of the last five years, and in the aggregate of five years, 1883 to 1887, inclusive, and of twenty-five years, 1858 to 1882, inclusive:

TABLE XXXIV.

BIRTH-PLACE.	1889.	1888.	1887.	1886.	1885.	5 years, 1883-1887.	25 years, 1858-1882.
United States.....	50.88	49.50	51.60	53.81	55.22	54.02	61.30
Foreign countries.....	33.28	30.94	28.46	26.87	27.21	27.19	25.13
Mixed.....	15.84	19.56	19.94	19.32	17.57	18.79	13.57
Total.....	100.00	100.00	100.00	100.00	100.00	100.00	100.00

It will be of some interest to notice that by the exhibit of the two preceding Tables, it is shown, that, although the marriages of the native born (whether the progeny of foreign born parents or natives) have steadily *increased in numbers*, they have also steadily *decreased in proportion*, that is, to the whole number of marriages, while the marriages of the class of the exclusively foreign born, have been

gradually *increasing in proportion*. The marriages in the class of mixed nativity, during 1889, fell off nearly four per cent.

AGES OF PERSONS MARRIED.

The following Table will show the number of grooms who were married, in 1889, to brides in the same age period of life, or in age periods earlier or more advanced:

TABLE XXXV.

AGES OF GROOMS.	AGES OF BRIDES.													Whole No. Grooms.
	Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	Not Stated.	
Under 20.....	49	16	4	...	...	...	...	...	...	...	...	...	...	69
20 to 25.....	280	760	87	9	2	1	..	1	..	..	..	..	..	1,140
25 to 30.....	109	354	317	47	13	1	..	..	..	..	..	..	..	841
30 to 35.....	27	130	142	98	22	5	..	..	..	..	..	..	..	424
35 to 40.....	7	43	61	68	37	4	2	..	..	..	..	..	..	222
40 to 45.....	1	7	22	27	30	19	4	1	..	..	..	..	..	111
45 to 50.....	...	8	10	23	27	14	6	..	1	..	..	..	..	89
50 to 55.....	...	3	3	7	12	15	7	2	..	..	..	..	..	49
55 to 60.....	1	1	2	4	6	5	5	6	3	..	..	..	..	33
60 to 65.....	...	...	1	3	5	4	4	4	6	..	..	..	..	27
65 to 70.....	...	...	1	1	2	2	4	2	1	..	1	..	..	14
70 to 75.....	...	...	1	1	1	1	..	1	1	..	1	1	..	8
75 to 80.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
80 to 85.....	...	1	...	...	...	...	...	...	...	1	..	..	..	2
Not Stated .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whole No. Brides..	474	1,323	651	288	157	71	32	17	12	1	2	1	..	3,029

The eccentricities of marriagable persons in relation to matrimonial alliances, was exemplified, during 1889, by the marriage of two grooms of 19 years with brides of 27 and 29 years; one groom of 22 years with a blushing bride of 54 years. One octogenarian married a youthful bride 61 years his junior, and one boyish groom of nearly three score years took for a bride a maiden under 20 years of age.

The same results, in 1889, in relation to numbers in the different age periods, may be presented in a different and perhaps clearer way as follows:

TABLE XXXVI.

1889.	Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	Not stated.
Males.....	69	1,140	841	424	222	111	89	49	33	27	14	8	....	2	....	....
Females.....	474	1,323	651	288	157	71	32	17	12	1	2	1	....	....	....	....
Total persons.....	543	2,463	1,492	712	379	182	121	66	45	8	16	9	....	2	....	....

The whole number of persons in each division of ages, of both sexes, married in Rhode Island in each of the last twenty-four years, that is, from 1866 to 1889, inclusive, is presented in the following Table:

TABLE XXXVII.

YEARS.	Under 20.	20 to 25.	25 to 30.	30 to 35.	35 to 40.	40 to 45.	45 to 50.	50 to 55.	55 to 60.	60 to 65.	65 to 70.	70 to 75.	75 to 80.	80 to 85.	85 to 90.	Not stated.
1866.....	693	1,931	1,025	419	213	127	81	59	25	21	12	1	.....	.....	.....	23
1867.....	696	1,886	1,104	416	211	148	91	48	37	18	18	5	3	1	.....	9
1868.....	644	1,835	1,050	432	219	133	82	61	30	29	11	8	4	.....	.....	32
1869.....	642	1,814	1,051	468	227	131	79	46	35	15	11	2	3	2	.....	49
1870.....	744	1,883	1,081	415	216	159	86	61	26	24	12	3	2	.....	.....	6
1871.....	697	1,914	1,118	392	228	115	73	56	35	22	6	7	3	.....	.....	6
1872.....	786	2,073	1,182	434	237	131	81	61	43	21	13	6	1	.....	.....	5
1873.....	762	2,177	1,156	507	253	140	87	68	35	24	12	6	6	.....	.....	27
1874.....	770	1,992	1,179	459	268	159	101	52	36	39	8	9	1	.....	.....	9
1875.....	681	2,058	1,108	475	252	150	101	60	32	29	13	4	1	.....	.....	6
1876.....	691	1,741	1,011	450	224	151	86	53	27	19	12	1	2	.....	.....	9
1877.....	631	1,745	1,118	459	244	125	92	52	46	14	15	11	2	1	.....	9
1878.....	618	1,832	1,123	441	259	162	74	49	39	20	17	2	4	.....	.....	8
1879.....	639	1,879	1,156	481	272	123	78	56	39	26	18	9	2	2	1	11
1880.....	688	2,301	1,262	556	329	163	91	65	33	27	15	3	3	1	.....	1
1881.....	599	2,208	1,410	547	298	187	107	54	34	31	16	5	1	1	.....	2
1882.....	498	2,125	1,377	563	301	161	102	57	36	27	11	5	3	2	.....	.....
1883.....	497	2,108	1,370	486	319	183	115	73	31	20	14	3	2	1	.....	.....
1884.....	484	2,027	1,289	569	307	152	114	64	48	30	23	6	3	.....	.....	.....
1885.....	438	1,973	1,296	540	309	163	102	57	45	27	13	7	3	.....	1	2
1886.....	505	2,133	1,552	603	283	174	103	73	24	26	18	5	1	.....	.....	.....
1887.....	501	2,308	1,552	607	294	162	114	49	39	23	19	7	3	.....	.....	.....
1888.....	582	2,427	1,608	640	330	207	105	60	36	17	23	7	2	.....	.....	.....
1889.....	543	2,463	1,492	712	379	182	121	66	45	8	16	9	.....	2	.....	.....

The following summary will show the number of persons married, the number of persons married under twenty years of age, and the percentages of marriages of persons under twenty years of age, during four periods of five years each, that is, from 1870 to 1889, inclusive, and during the year 1889:

	Number of persons married.	Number married under twenty years of age.	Percentage of persons married under twenty years of age.
1870 to 1874	24,812	3,759	15.2
1875 to 1879.....	23,480	3,260	13.9
1880 to 1884.....	26,644	2,766	10.4
1885 to 1889.....	28,256	2,569	9.1
1889.....	6,058	543	8.9

In the following Table will be found the number and proportion of the persons married under 20 years of age, of both sexes, in seven periods of five years each, from 1854 to 1888, inclusive; for the whole period of thirty-five years, and in 1889:

TABLE XXXVIII.

5-YEAR PERIODS.	Total number of persons married.	Persons married under 20.	Percentage under 20.
1854-1858	13,842	1,932	13.95
1859-1863	16,042	2,500	15.58
1864-1868	21,374	3,049	14.26
1869-1873	24,308	3,631	14.93
1874-1878	23,770	3,391	13.84
1879-1883	26,330	2,921	11.09
1884-1888	27,314	2,510	9.19
35 years, 1854-1888	152,970	19,934	13.03
1889	6,058	543	8.09

Per cent., first fifteen years.....14.60
 Per cent., second fifteen years.....13.28
 Per cent., last five years..... 9.01

PROPORTION OF SEX. •

Table exhibiting the percentages of GROOMS in each division of ages, in each of the last thirty years:

TABLE XXXIX.

YEARS.	Under 20.	20 to 25.	25 to 30.	30 to 40.	40 to 50.	50 & over.	Total.
1860.....	5.0	42.8	26.9	16.3	5.7	3.3	100.0
1861.....	4.6	44.5	25.4	15.5	5.8	4.2	100.0
1862.....	4.2	37.8	27.9	18.3	5.9	5.9	100.0
1863.....	3.5	38.0	29.6	17.2	5.8	5.9	100.0
1864.....	4.3	38.8	27.3	17.9	7.4	4.3	100.0
1865.....	3.5	37.0	28.4	18.9	7.5	4.7	100.0
1866.....	5.3	40.9	27.0	16.4	6.3	4.1	100.0
1867.....	4.8	40.1	27.9	16.8	6.8	4.1	100.0
1868.....	4.1	39.9	28.2	17.1	6.1	4.6	100.0
1869.....	4.3	39.6	27.7	18.5	6.1	3.8	100.0
1870.....	4.8	40.4	28.1	16.0	6.4	4.3	100.0
1871.....	5.3	40.1	28.9	16.5	4.9	4.3	100.0
1872.....	4.8	41.3	28.2	16.6	5.2	4.4	100.0
1873.....	3.8	42.4	26.7	17.0	6.0	4.1	100.0
1874.....	4.1	40.4	27.2	17.5	6.4	4.4	100.0
1875.....	3.5	40.9	27.8	17.6	6.1	4.2	100.0
1876.....	5.1	37.5	28.6	17.9	5.6	4.3	100.0
1877.....	4.3	36.0	30.2	18.7	5.9	6.9	100.0
1878.....	3.9	38.5	29.0	18.0	6.3	4.3	100.0
1879.....	3.9	37.8	28.8	19.3	5.4	4.8	100.0
1880.....	3.6	38.9	27.5	19.9	5.8	4.3	100.0
1881.....	2.8	37.2	29.7	19.5	6.8	4.0	100.0
1882.....	2.2	36.0	31.4	20.0	6.1	4.3	100.0
1883.....	2.9	36.2	31.7	17.7	7.2	4.3	100.0
1884.....	2.5	36.2	29.1	21.0	6.2	5.0	100.0
1885.....	2.6	34.7	30.2	20.9	6.8	4.8	100.0
1886.....	2.5	35.2	31.9	19.6	6.8	4.0	100.0
1887.....	1.7	37.1	31.6	19.6	6.2	3.8	100.0
1888.....	2.8	36.1	31.1	19.8	6.5	3.7	100.0
1889.....	2.3	37.6	27.8	21.3	6.6	4.4	100.0

GROOMS.

Table exhibiting the percentages of BRIDES in each division of ages, in each of the last thirty years:

TABLE XL.

YEARS.	Under 20.	20 to 25.	25 to 30.	30 to 40.	40 to 50.	50 & over.	Total.
1860.....	25.8	44.1	17.0	9.1	2.6	1.4	100.0
1861.....	29.6	42.0	15.2	7.8	4.1	1.3	100.0
1862.....	24.9	41.3	16.7	11.8	4.1	1.2	100.0
1863.....	24.9	42.6	16.9	9.8	4.1	1.7	100.0
1864.....	24.2	43.4	17.8	10.3	2.9	1.4	100.0
1865.....	22.6	43.3	19.1	11.0	3.5	1.5	100.0
1866.....	24.7	42.9	17.4	11.0	2.7	1.3	100.0
1867.....	25.4	40.5	19.3	10.0	3.4	1.4	100.0
1868.....	24.4	40.9	18.1	11.6	3.3	1.7	100.0
1869.....	24.1	40.5	18.7	12.1	3.4	1.2	100.0
1870.....	26.8	39.4	17.9	10.8	3.9	1.2	100.0
1871.....	24.6	41.9	19.1	10.1	3.1	1.2	100.0
1872.....	26.7	40.5	18.4	9.9	2.2	1.3	100.0
1873.....	25.3	40.8	17.5	12.0	2.7	1.7	100.0
1874.....	26.3	38.1	19.3	11.1	3.9	1.3	100.0
1875.....	23.9	42.1	16.8	11.8	4.0	1.4	100.0
1876.....	25.6	39.8	17.6	12.0	3.7	1.3	100.0
1877.....	23.4	40.4	18.8	12.1	3.6	1.7	100.0
1878.....	22.7	40.4	19.3	12.2	3.8	1.6	100.0
1879.....	22.8	40.7	19.4	12.1	3.0	2.0	100.0
1880.....	21.1	44.2	18.0	12.0	3.3	1.4	100.0
1881.....	19.0	43.0	21.5	11.2	3.8	1.5	100.0
1882.....	16.7	44.8	20.9	12.6	3.9	1.1	100.0
1883.....	16.2	44.2	20.6	13.2	4.3	1.5	100.0
1884.....	16.4	43.0	21.3	13.2	4.2	1.9	100.0
1885.....	14.9	44.6	21.8	13.2	3.8	1.7	100.0
1886.....	15.8	42.4	24.5	12.5	3.3	1.5	100.0
1887.....	15.9	44.1	22.8	12.1	3.5	1.6	100.0
1888.....	16.4	44.3	22.1	12.4	3.7	1.1	100.0
1889.....	15.1	43.7	21.5	14.7	3.4	1.6	100.0

It will be noticed, in the preceding tables, that the proportions of persons married of both sexes, under twenty years of age, largely decreased during the last decade.

Of males, the proportion has decreased about 40 per cent., and of females about 30 per cent.

The proportion of males married, between the ages of twenty and twenty-five, has decreased about 12 per cent., and has correspondingly increased in the more advanced age periods.

The proportion of females married, between twenty and twenty-five years of age, has continued about the same, while of those between twenty-five and forty there has been an increase of proportion similar to that of males.

There has been an increase of about one year in the average age of the males who were married during the eleven years, 1879 to 1889, inclusive, over the average age of the males who were married during the eleven years, 1859 to 1869, inclusive. The average age of the females married, during the same periods, increased about one and one-half years during the last eleven.

NUMBER OF TIMES MARRIED.

There will be found in the following Table the number of grooms and of brides who were married for the first, second, third, etc., time, in 1889:

TABLE XLI.

	First Marriage.	Second Marriage.	Third Marriage.	Fourth Marriage.	Fifth Marriage.	Sixth Marriage.	Total.
Grooms.....	2,534	452	41	1	.....	1	3,029
Brides.....	2,692	322	14	1	.....	.....	3,029

The proportion of *grooms* married for the first time, in 1889, was 83.6 per cent. of the whole number, and the proportion of *brides* married for the first time was 89.1 per cent.

The following Table will show not only the number of times each of the parties were married, but also the number of bachelors and widowers who married spinsters, the number who married widows of first or second widowhood, etc., and of spinsters and widows who married bachelors, and widows of the second, third or fourth marriage, etc.:

TABLE XLII.

GROOMS.	BRIDES.					Total Grooms.
	First.	Second.	Third.	Fourth.	Fifth.	
First marriage.....	2,381	147	5	1	.....	2,534
Second marriage.....	293	152	7	.....	.....	452
Third marriage.....	16	23	2	.....	.....	41
Fourth marriage.....	1	.....	.....	.....	.....	1
Fifth marriage.....	.....	.....	.....	.....	.....	.....
Sixth marriage.....	1	.....	.....	.....	.....	1
Total, Brides.....	2,692	322	14	1	.....	3,029

It will be seen, by Table XLII, that 153 bachelors married widows, 6 of whom married brides that had been twice or thrice widowed. Of the 495 widowers who married in 1889, 311 married spinsters, and 184 married widows. Of the widows who married widowers, 9 had been twice married previously. One widower married a spinster for his sixth bride.

MARRIAGES OF PERSONS OF COLOR.

The number of marriages of persons of color, in Rhode Island, in 1889, was 75. This includes five marriages in which one of the parties was white. The number and color of the individuals were, therefore, 145 persons of color and 5 persons white. The white persons were one male and four females. The marriages, however, may be properly included in the above class, inasmuch as the offspring of such marriages are persons of color.

The number reported during 1889, from the different towns, was as follows, viz.:

Providence (including four white brides and one white groom).....	57
Newport City.....	8
South Kingstown.....	4
Cranston.....	2
Westerly.....	2
East Greenwich, } one each.....	2
New Shoreham, }	
Total	75

MARRIAGES OF THE DIVORCED.

The following Table will give the towns from which returns of marriage with the facts of divorce were reported during 1889, the whole number of marriages of divorced persons, whether of one or both parties; also whether the second or third marriage of the divorced groom or bride; and number of remarriages of same persons:

TABLE XLIII.

TOWNS.	Number of Marriages.	Number of Divorced Persons Married.	Groom.	Bride.	Second Marriage of Groom.	Third Marriage of Groom.	Second Marriage of Bride.	Third Marriage of Bride.	Re-marriages, Same Parties.
Providence City.....	97	110	54	56	54	.....	56	.....	2
Warwick.....	14	14	4	10	4	.....	10	.....	.....
Westerly.....	7	7	5	2	5	.....	2	.....	.....
Charleston..	1	1	.....	1	.....	.....	1	.....	.....
Hopkinton....	3	3	3	.....	3	.....	.....	.....	.....
Total State	122	135	66	69	66	.....	69	.....	2

There were 122 marriages, in 1889, in which one or both of the parties had been divorced, and in 13 of which both parties had been divorced. Of the 13 marriages where both parties had been divorced, 2 were remarriages of the same persons.

The proportion of the *number of marriages*, of which one or both of the parties had been divorced, to the whole number of marriages, was about one in every 25, or about 4.0 per cent.

But the proportion of divorced *persons* married during 1889, to the whole number of persons married in the same year, was about one in every 44.8, or 22 in every 1,000.

The number of divorced persons married in 1889 was 30 more than in the previous year.

DIVORCES, 1889.

According to the returns made to the Secretary of the State Board of Health by the clerks of the Supreme Courts of the different counties in Rhode Island, the number of applications for divorce, during 1889, was three hundred and sixty-six (366).

The number of divorces granted, during 1889, was two hundred and seventy-four (274).

There were sixty-two more applications, during 1889, than during the preceding year, and the number of divorces granted was fifty more.

Divorces are decreed for the following seven statute causes, viz.:

1. Adultery.
2. Extreme cruelty.
3. Wilful desertion for five years of either of the parties, or for a shorter period, in the discretion of the court.
4. Continued drunkenness.
5. Neglect or refusal to provide necessities (having ability) for the subsistence of a wife.
6. Gross misbehavior and wickedness other than aforesaid.
7. Impotency.

Divorces are also decreed, or marriages set aside, in the discretion of the court, for ascertained affinity, consanguinity, idiocy, insanity, penitentiary crimes, and bigamous or otherwise illegal marriage.

The following Table shows the number of applications for divorce, and the number granted, in 1889, in each county of the State; also the causes alleged for the applications:

TABLE XLIV.

COUNTIES.	Number of Applications.	Number Granted.	CAUSES ALLEGED.							Total Causes Alleged.	
			Adultery.	Extreme Cruelty.	Willful Desertion.	Continued Drunkenness.	Neglect to Provide Necessaries, &c.	Other Gross Misbehavior.	Impotency.		Illegal Marriage.
Bristol.....	11	6	1	3	3	1	2	1	.....	.....	11
Kent.....	32	27	5	.....	18	.....	4	..	.....	.....	27
Newport.....	18	14	3	2	4	3	14	.....	.....	.....	28
Providence.....	266	211	65	68	141	64	160	45	.....	.....	543
Washington.....	39	16	4	11	23	9	19	15	1	.....	82
Whole State.....	366	274	80	84	189	77	199	61	1	.....	691

There were, during the year 1889, three hundred and sixty-six (366) applications for divorce, and the whole number of causes alleged was six hundred and ninety-one (691). There were, therefore, an average of less than two causes alleged in each application. That average is not far from the rule of many years.

The causes alleged why divorce should be granted, in the applications during 1889, were 131 more in number than in 1888.

In order to show the actual number of applications, and the number of divorces granted in each of the last seventeen years, the following summary is presented:

	Applications for divorce.	Divorces granted.	Applications refused or continued or withdrawn.
1873	261	173	88
1874	276	242	34
1875	227	158	69
1876	254	196	58
1877	257	178	79
1878	258	196	58
1879	255	246	9
1880	347	273	74
1881	350	268	82
1882	339	271	68
1883	321	257	64
1884	320	266	54
1885	293	227	66
1886	336	257	79
1887	322	248	74
1888	304	224	80
1889	366	274	92
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17 years, total	5,086	3,954	1,132

During the last seventeen years the proportion of decrees of divorce, to whole number of applications, was 77.7 per cent. During 1883 it was 80 per cent., during 1884, 83 per cent., during 1885, 78.5 per cent., during 1886, 76.5 per cent., during 1887, 77 per cent., during 1888, 73.6 per cent., and during 1889 it was 74.8 per cent.

The proportion of *divorces granted*, in 1889, to the whole number of marriages during the same year, was *one divorce* to every eleven and less than one-tenth marriages.

The proportion of *applications for divorce* to whole number of marriages, during the year, was *one application* to every eight and one-third marriages.

The small number of marriages in 1889, in proportion to the population, will account in part for the unusual *ratio* of applications for divorce and number granted.

The following Table shows the number of divorces granted in each county, and in the whole State, in each of the last twenty-one years, and the proportion of marriages to each divorce granted in each year :

TABLE XLV.

YEARS.	Bristol County.		Kent County.		Newport County.		Providence County.		Washington County.		Whole State.	
	Divorces Granted.	Marriages to one Divorce.	Divorces Granted.	Marriages to one Divorce.	Divorces Granted.	Marriages to one Divorce.	Divorces Granted.	Marriages to one Divorce.	Divorces Granted.	Marriages to one Divorce.	Divorces Granted.	Marriages to one Divorce.
1869.....	10	10 6	15	12.5	6	27.7	120	13.8	11	15.5	162	14.1
1870.....	3	27.7	18	11.8	6	26.3	152	11.3	21	9.3	200	11.8
1871.....	5	16.8	11	17.9	4	49.7	123	13.3	18	11.4	161	14.5
1872.....	8	10.2	13	15.7	8	22.9	149	12.6	22	8.9	200	12.7
1873.....	6	16.2	22	9.8	8	21.9	131	14.8	6	33.7	173	15.2
1874.....	10	8.9	20	8.0	6	29.0	190	10.0	16	11.6	242	10.5
1875.....	2	50.0	18	8.8	7	23.4	120	14.9	11	20.5	158	15.7
1876.....	6	14.5	15	12.8	7	20.5	148	11.1	20	8.8	190	11.5
1877.....	7	12.0	9	16.3	7	26.0	134	12.4	21	9.9	178	12.8
1878.....	4	26.0	11	13.3	13	12.8	156	10.9	12	17.3	196	11.9
1879.....	5	18.8	19	9.0	7	24.1	195	9.1	20	9.7	246	9.7
1880.....	8	12.1	23	9.4	11	17.6	208	9.7	23	17.0	273	10.1
1881.....	6	20.1	26	7.3	10	16.9	207	10.0	19	11.0	268	10.4
1882.....	6	15.0	18	10.3	15	13.0	221	8.9	11	16.2	271	9.7
1883.....	6	15.8	15	11.5	9	21.2	214	9.2	13	13.3	257	10.2
1884.....	4	16.7	20	8.0	12	15.7	209	9.3	21	8.2	266	9.6
1885.....	3	23.0	9	18.6	17	11.2	186	10.1	12	15.0	227	11.0
1886.....	5	16.0	17	11.0	15	12.3	194	10.9	26	7.3	257	10.7
1887.....	1	75.0	23	8.0	13	13.4	187	11.8	24	7.9	248	11.4
1888.....	5	15.8	14	13.5	4	46.0	188	12.5	13	16.5	224	13.5
1889.....	6	12.5	27	8.3	14	14.0	211	11.2	16	10.8	274	11.1

The ratio of divorces granted in the entire State, during 1889, to the whole number of marriages during the same year, was one divorce to about every eleven and one-tenth marriages, as previously stated.

During the ten years 1869 to 1878, inclusive, the ratio of divorce to number of marriages was one divorce to every thirteen; during the ten years 1879 to 1888, inclusive, the ratio was one divorce to every ten and six-tenths marriages.

The average of the last four years was one divorce to every eleven and six-tenths marriages.

During the twenty years 1869-1888 the average proportions of divorce to marriage, in the several counties and the State, have been as follows :

Bristol County.	One divorce to every 20.1 marriages.
Kent County.....	One divorce to every 11.4 marriages.
Newport County	One divorce to every 22.5 marriages.
Providence County.....	One divorce to every 11.4 marriages.
Washington County.....	One divorce to every 13.8 marriages.
Whole State ...	One divorce to every 11.9 marriages.

Information has not unfrequently been solicited from the State Registrar, in regard to facts of divorce in Rhode Island, relating to length of time the applicants had been married, the length of time resident in the State, the number of petitions by the wife, and by the husband, in addition to the facts usually returned by the clerks of the Supreme Courts to the Secretary of the State Board of Health (the State Registrar), as the law requires. This information has been desired by parties engaged in writing papers upon the subject of divorce for the Quarterlies and other periodical press, and by committees for the purpose of use in making legislative or congressional reports.

Such information has been furnished, with proper courtesy, by all the clerks of the Supreme Courts of the State, with the exception of the clerk in Providence county. The clerks are public officers, salaried by the State, and the additional time required, when the other facts are ascertained, would be of very moderate amount. The clerk of the Providence county Supreme Court has an able assistant, also salaried by the State.

No definite statistics in relation to the additional questions above stated, upon which information has been desired, can be given for the State, with the facts in Providence county withholden, as that county comprises so large a proportion of the population, and so large a number of the applicants for divorce.

Table showing the Number of Marriages to every Decree of Divorce, in five of the New England States, during the thirteen years from 1876 to 1888, inclusive:

TABLE XLVI.

STATES.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.
Rhode Island.....	11.5	12.8	11.9	9.7	10.1	10.4	9.7	10.2	9.6	11.0	10.7	11.4	13.5
Massachusetts.....	24.2	23.1	21.4	23.4	26.8	40.9	34.3	27.8	28.2	26.4	30.0	24.5	15.7
Connecticut.....	10.9	10.1	10.7	13.4	13.9	11.6	12.8	12.1	14.9	13.3	14.2	14.9	13.8
Vermont.....	16.0	15.0	14.0	21.0	20.0	16.0	17.8	16.4	.....	.....	20.0	13.5	.....
New Hampshire.....	.....	.....	.....	.....	7.7	9.2	10.9	12.8	10.4	10.9	8.3	10.7	9.4

DEATHS, 1889.

The number of deaths registered in Rhode Island, during 1889, according to the returns made to the State Registrar, was six thousand, two hundred and fifty-nine (6,259).

This number is smaller by 335 than that of the year 1888, and 81 less than that of 1887.

The death-rate (nineteen in every 1,000 living persons) was about one and five-tenths less than that of the previous year.

The following summary will show the death-rates per 1,000 for each of the last seven census years, in comparison with 1887, 1888 and 1889:

1860.	1865.	1870.	1875.	1880.	1885.	1887.	1888.	1889.
15.4.....	18.4.....	14.9.....	16.7.....	17.5.....	17.7.....	19.9.....	20.4.....	19.0

On the following page will be found the death-rates, by counties, for thirty years:

SEX OF DECEDENTS.

Of the 6,259 persons whose deaths were returned, during the year 1889, 3,093 were males, and 3,166 were females; the ratio standing at 97.7 males to each 100 females, or 495 males and 505 females in every 1,000 decedents.

The following Table will show the number and proportion of males and females among the *decedents* in Rhode Island, during the ten years 1853 to 1862, inclusive; also in each of the twenty-seven years from 1863 to 1889, inclusive, and for the entire period of thirty-seven years:

TABLE XLVIII.

DEATHS.			
	Males.	Females.	Males to every 100 females.
10 years, 1853-1862.....	10,930.....	11,269.....	96.9
1863.....	1,621.....	1,586.....	102.2
1864.....	1,633.....	1,727.....	92.4
1865.....	1,686.....	1,719.....	98.1
1866.....	1,497.....	1,473.....	101.5
1867.....	1,442.....	1,417.....	99.7
1868.....	1,413.....	1,499.....	94.3
1869.....	1,696.....	1,686.....	100.6
1870.....	1,588.....	1,650.....	96.2
1871.....	1,621.....	1,733.....	94.1
1872.....	2,118.....	2,129.....	99.4
1873.....	2,166.....	2,237.....	95.5
1874.....	2,111.....	2,118.....	99.7
1875.....	2,108.....	2,209.....	95.4
1876.....	1,969.....	2,147.....	91.7
1877.....	2,132.....	2,318.....	92.0
1878.....	2,161.....	2,280.....	94.8
1879.....	2,183.....	2,289.....	95.4
1880.....	2,366.....	2,463.....	96.0
1881.....	2,367.....	2,559.....	96.8
1882.....	2,487.....	2,587.....	96.5
1883.....	2,627.....	2,655.....	99.0
1884.....	2,486.....	2,655.....	93.6
1885.....	2,607.....	2,782.....	93.7
1886.....	2,833.....	3,016.....	93.9
1887.....	3,177.....	3,163.....	100.4
1888.....	3,199.....	3,395.....	95.4
1889.....	3,093.....	3,166.....	97.7
37 years.....	69,417.....	71,837.....	96.8

The following Table of births, during the same period of time as the preceding, will show by comparison the different proportions of the sexes in the two classes of events :

TABLE XLIX.

BIRTHS.			
	Males.	Females.	Males to every 100 females.
10 years, 1853-62	18,377	17,260	106.4
1863	1,892	1,788	105.8
1864	1,949	1,942	100.3
1865	2,096	1,857	112.9
1866	2,546	2,356	108.1
1867	2,655	2,464	107.7
1868	2,745	2,627	104.5
1869	2,685	2,560	104.9
1870	2,679	2,536	105.6
1871	2,878	2,800	102.8
1872	3,085	3,058	100.9
1873	3,135	2,887	108.6
1874	3,311	3,155	104.9
1875	3,362	3,146	106.9
1876	3,291	3,038	108.3
1877	3,163	3,072	103.0
1878	3,402	3,312	102.7
1879	3,259	3,091	105.4
1880	3,241	3,054	106.1
1881	3,498	3,263	107.2
1882	3,509	3,316	105.8
1883	3,548	3,498	101.4
1884	3,713	3,592	103.4
1885	3,591	3,437	104.4
1886	3,897	3,724	104.6
1887	3,968	3,700	107.2
1888	4,023	3,817	105.4
1889	4,193	4,027	104.1
37 years	103,691	100,377	106.2

SEASON AND MORTALITY.

The whole number of decedents, and the sex of the same, in each month of the year 1889, and in each division of the State, may be found in Table V, on the tenth page.

The influence of season upon mortality may be further illustrated by the following Table, which shows the number and percentage of deaths in each quarter of each of the last five years, and in the aggregate for thirty-seven years, 1853 to 1889, inclusive :

TABLE L.

SEASONS.	1889.		1888.		1887.		1886.		1885.		1853-1888.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
January-March	1,563	24.97	1,709	25.92	1,448	22.84	1,413	24.16	1,433	26.50	31,928	23.63
April-June. ...	1,426	22.78	1,496	22.69	1,412	22.27	1,297	22.17	1,237	22.95	28,792	21.31
July-Septemb'r	1,870	29.87	1,911	28.99	1,887	29.76	1,745	29.83	1,575	29.22	39,087	29.01
Oct-December.	1,400	22.38	1,478	22.40	1,592	25.13	1,394	23.84	1,144	21.24	35,288	26.05
Total.....	6,259	100.00	6,594	100.00	6,340	100.00	5,849	100.00	5,389	100.00	135,095	100.00

Comparing the percentages of 1889 with those of the thirty-six years, we find the per cent. of the first quarter somewhat larger ; the second quarter slightly greater, and the last quarter considerably smaller than the same for the average of the thirty-six years. The greatest mortality for any one season of any one year may be found in the third quarters of 1886, 1887 and 1889.

The third quarter shows the largest mortality, in every year, with scarcely an exception.

TABLE LI.

Showing the Months in the Order of Largest Mortality, for Eight Years.

1889.	1888.	1887.	1886.	1885.	1884.	1883.	1882.
1. August..... 657	August..... 722	July..... 651	August..... 644	July..... 587	August..... 582	July..... 537	August..... 589
2. July..... 645	July..... 646	August..... 647	July..... 589	August..... 518	October..... 518	August..... 499	November..... 461
3. September. 538	January..... 615	September..... 589	March..... 515	March..... 499	September..... 514	April..... 475	September..... 444
4. March..... 547	March..... 582	December..... 554	September..... 512	January..... 492	December..... 457	January..... 455	July..... 410
5. February... 530	September..... 543	October..... 520	October..... 512	April..... 483	July..... 456	May..... 452	May..... 406
6. April..... 495	October..... 536	November..... 519	January..... 488	September..... 470	November..... 492	October..... 443	December..... 405
7. January.... 486	April..... 536	March..... 517	April..... 460	February..... 442	April..... 416	March..... 442	April..... 401
8. October.... 484	February..... 512	April..... 517	December..... 454	December..... 404	March..... 389	September..... 435	October..... 399
9. May..... 470	May..... 509	January..... 490	November..... 428	May..... 397	January..... 378	December..... 409	January..... 398
10. December.. 470	December..... 500	May..... 457	May..... 420	October..... 376	May..... 369	June..... 401	February..... 392
11. June..... 461	June..... 461	February..... 441	June..... 417	November..... 364	February..... 344	November..... 392	March..... 390
12. November.. 446	November..... 442	June..... 438	February..... 410	June..... 357	June..... 326	February..... 352	June..... 379
6,259	6,594	6,340	5,849	5,889	5,141	5,282	5,074

PARENTAGE OF DECEDENTS.

The number of decedents, in 1889, of the two general classes of parentage, that is, native and foreign, may be found in Table I, on pages 2-5.

Of the whole number of decedents, 6,259, reported in 1889, 2,806 were of native, and 3,453 were of foreign parentage.

By the term "foreign parentage" is meant the decedents whose fathers were born in some other country and not in the United States. The grandchildren of the foreign born are reckoned as of native parentage, if their fathers were born in the United States.

The following twelve towns reported a larger number of decedents of foreign parentage than of native, namely: Warren, Warwick, Burrillville, Cumberland, Johnston, Lincoln, North Providence, North Smithfield, Pawtucket, Providence, and Woonsocket; also the State Institutions at Cranston.

These proportions varied from a moderate excess to three and four times as many of foreign as of native parentage.

In Woonsocket there were 344 of foreign, and 81 of native.

The following Table gives the number and proportion in every one thousand deaths of decedents of native and of foreign parentage, in each of the last five years; and in the aggregate for thirty years, or from 1858 to 1887, inclusive:

TABLE LII.

PARENTAGE.	1889.		1888.		1887.		1886.		1885.		30 years, 1858-1887.	
	Number.	Per 1,000.	Number.	Per 1,000.	Number.	Per 1,000.	Number.	Per 1,000.	Number.	Per 1,000.	Number.	Per 1,000.
Native.....	2,806	448.3	3,043	461.5	2,926	461.5	2,747	469.7	2,765	513.8	73,335	539.4
Foreign.....	3,453	551.7	3,551	538.5	3,414	538.5	3,102	530.3	2,624	486.2	62,619	460.6
Total... ..	6,259	1000.0	6,594	1000.0	6,340	1000.0	5,849	1000.0	5,389	1000.0	135,954	1000.0

AGE OF DECEDENTS.

In Table I, on pages 2-5, may be found the aggregate and average age of all the decedents whose deaths occurred in 1889, and with the age of each sex, in each town and county in the State.

By that Table it will be seen that the average age of all the male decedents in the State, in 1889, was 32.20 years, and that the average age of all the female decedents, in the same year, was 35.74 years; the average age of all decedents, of both sexes, 34.00 years.

The average age of all the decedents in the State, in 1889, was one-half year less than the average for 1888.

The following Table will present, separately, the average age of the male and female decedents, and the average age of all decedents, in each year for thirty years; also the average age in six periods of five years each, from 1860 to 1889, inclusive:

TABLE LIII.

YEARS.	Average Age of Males.	Average Age of Females.	Average Age of All.	Average Age, 5-year periods, 1860-1889.
1860.....	28.51	30.70	29.6529.71
1861.....	26.95	30.58	28.82	
1862.....	29.64	32.65	31.15	
1863.....	28.29	30.86	29.56	
1864.....	28.13	30.43	29.4031.58
1865.....	26.38	28.97	27.69	
1866.....	31.13	25.07	33.09	
1867.....	32.16	35.86	34.01	
1868.....	30.47	35.08	32.8530.80
1869.....	28.62	31.29	30.25	
1870.....	31.02	32.75	31.90	
1871.....	32.57	34.43	33.52	
1872.....	28.41	31.15	29.7731.29
1873.....	26.18	28.62	27.42	
1874.....	28.03	31.66	28.86	
1875.....	29.72	32.75	31.27	
1876.....	31.47	33.21	32.3733.24
1877.....	29.25	31.56	30.45	
1878.....	29.02	31.11	30.09	
1879.....	31.29	33.24	32.29	
1880.....	29.62	32.06	30.8633.81
1881.....	30.99	34.07	32.55	
1882.....	31.33	35.57	33.50	
1883.....	33.64	37.44	35.55	
1884.....	32.29	35.12	33.7633.51
1885.....	33.53	35.60	34.59	
1886.....	33.02	34.91	34.01	
1887.....	30.97	32.91	31.95	
1888.....	33.17	35.74	34.5334.00
1889.....	32.20	35.74	34.00	

The above table shows that the average longevity of the decedents in Rhode Island increased over three years, during a period of twenty-

five years, ending with 1884, and of over four years increase, as the average of the last five years.

The following Table will present some of the facts of the preceding as occurring in the different divisions of the State, as well as of the State at large. It will show the average age of the decedents in each of the larger divisions of the State, in each of the last four years, and also the average of each of six periods of five years each, comprising the thirty years from 1858 to 1887, inclusive :

TABLE LIV.

DIVISIONS OF THE STATE.	1889.	1888.	1887.	1886.	1883-1887, 5 years.	1878-1882, 5 years.	1873-1877, 5 years.	1868-1872, 5 years.	1863-1867, 5 years.	1858-1862, 5 years.
Bristol County.	37.84	35.53	33.20	40.04	38.45	36.68	33.61	35.12	34.78	35.56
Kent County.....	29.89	32.78	39.15	33.83	37.66	37.11	36.20	34.77	35.81	32.15
Newport County.....	43.26	39.93	37.15	50.00	42.41	39.21	40.68	40.04	33.54	35.01
*Providence County.....	32.00	30.49	29.60	30.07	31.83	30.60	28.46	25.26	29.16	28.44
Providence City.....	32.97	34.83	30.00	32.45	32.19	29.50	27.19	25.45	28.50	25.78
Washington County.....	48.52	44.37	40.70	44.12	43.39	41.01	41.14	39.67	30.87	34.21
Whole State.....	34.00	34.53	31.95	34.01	33.97	31.86	30.28	31.66	30.73	29.42

PERCENTAGE OF DECEDENTS BY DIFFERENT AGES.

In Table VI, on pages 12 to 17, inclusive, will be found the number of deaths in 1889, in each town and each county, of each sex, and in each period of life, with the percentage of the whole number of deaths in each division to the population of the same, as estimated by the authorities of each.

The following Table shows the percentages of decedents in each division of ages, to whole number of deaths, in each of the last six years, and in the aggregate for three periods; one of ten years and seven months, from June 1st, 1852, to December 31st, 1862, inclusive; one of ten years, from 1863 to 1872, inclusive; and one of ten years, from 1873 to 1882, inclusive :

* Exclusive of Providence City.

TABLE LV.

PERIODS OF LIFE.	1889.	1888.	1887.	1886.	1885.	1884.	10 years, 1873 to 1882.	10 years, 1863 to 1872.	10 years, 7 months, 1852 to 1862.
Under 1 year.....	21.0	19.3	19.6	19.9	18.8	20.1	18.9	18.0	17.6
1 and under 2	5.9	5.9	6.6	5.3	5.2	5.6	7.6	7.8	9.8
2 and under 5	5.4	6.6	8.2	6.5	6.1	6.6	8.4	7.9	9.6
Total under 5	32.3	31.8	34.4	31.7	30.1	32.3	34.9	33.7	37.0
5 and under 10	3.6	4.2	5.2	4.0	3.3	3.5	5.0	4.6	5.0
10 and under 20	5.4	5.7	5.1	5.5	5.6	4.8	5.8	6.2	5.8
20 and under 30	8.3	9.0	7.6	8.7	8.6	9.2	9.2	9.7	9.5
30 and under 40	7.5	7.5	7.0	7.5	7.9	8.1	7.8	8.1	8.7
40 and under 50	7.9	7.9	6.7	7.4	7.7	7.2	6.9	7.2	7.5
50 and under 60	8.3	8.4	8.0	8.1	8.1	8.1	7.2	7.3	6.7
60 and under 70	9.8	9.5	9.9	9.1	10.4	9.1	8.2	8.3	6.9
70 and under 80	10.1	9.0	9.2	10.6	10.4	9.5	8.8	8.4	7.3
80 and under 90	5.6	5.6	5.3	5.3	6.2	6.9	5.1	5.4	4.6
Over 90 and not stated	1.2	1.4	1.6	2.1	1.7	1.3	1.1	1.1	1.0
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Compared with the previous year, the proportion of decedents in 1889, under one year of age was nearly two in every hundred larger, but of all under five years of age the proportion was only one-half of one in every hundred.

The proportion under one year is larger than any year found on record.

In the division of ages of five years and over, the proportions do not vary much from the average of the last eight years.

The following Table will present the varying proportions of deaths to whole number of deaths, in four different periods of life, from 50 years of age to 90 years, grouped in three periods of averages of ten years each, and one period comprising the seven years, 1883-1889:

TABLE LVI.

AGE OF DECEDENTS.	1st Decade, 1852-1862.	2d Decade, 1863-1872.	3d Decade, 1873-1882.	7 Years, Ending 1889.
50 to 60	6.7 per cent.	7.3 per cent.	7.2 per cent.	8.3 per cent.
60 to 70	6.9 "	8.3 "	8.2 "	9.6 "
70 to 80	7.3 "	8.4 "	8.8 "	10.0 "
80 to 90	4.6 "	5.4 "	5.1 "	6.0 "

It has been elsewhere observed that the natural result of a lessened proportion of deaths in the earlier periods of life would be a larger proportion of living persons in the later periods, and consequently an increased death-rate in those periods, because of the larger proportional number liable to disease and other causes of death.

COLORED DECEDENTS.

There were 190 deaths of persons of color during 1889..

The towns from which they were returned, and number in each, were as follows :

Providence City.....	118
Newport City.....	26
Cranston (State Institutions).....	10
East Greenwich.....	7
East Providence.....	6
Warwick.....	5
Bristol.....	3
Charlestown, } Cranston (town), } South Kingstown, } Westerly..... }	2 each 8
Warren, } Coventry, } Jamestown, } Lincoln, } North Smithfield, } Pawtucket, } Hopkinton, }	1 each 7
Total.....	190

Sex.—Of the decedents of color, 98 were males, and 92 were females.

Season.—The deaths were in the different months as follows :

Months.	Deaths.	Months.	Deaths.	Months.	Deaths.	Months.	Deaths.
January.....	17	April.....	13	July	19	October.....	14
February.....	14	May.....	12	August.....	22	November	16
March.....	23	June.....	14	September.....	8	December.....	18
	—		—		—		—
First Quarter	54	Second Quarter	39	Third Quarter.....	49	Fourth Quarter ...	48

First six Months, 93; Second six Months, 97; Total, 190.

The following summary will show the proportion, to the whole estimated colored population, of each of the events of birth, marriage and death of colored persons, during the twelve years from 1878 to 1889, inclusive :

	One Birth in every	One Person married in every	One Death in every
1878.....	36.4.....	39.2.....	40.2.....
1879.....	39.6.....	51.4.....	37.3.....
1880.....	47.1.....	43.3.....	44.0.....
1881.....	34.3.....	39.2.....	35.4.....
1882.....	36.8.....	44.5.....	45.4.....
1883.....	33.4.....	63.3.....	39.7.....
1884.....	34.8.....	46.0.....	34.5.....
1885.....	36.7.....	51.7.....	40.1.....
1886.....	34.6.....	43.2.....	37.8.....
1887.....	35.8.....	38.9.....	37.2.....
1888.....	37.6.....	55.0.....	38.0.....
1889.....	38.7.....	52.0.....	40.0.....

In every one thousand of the colored population there were, in 1889,

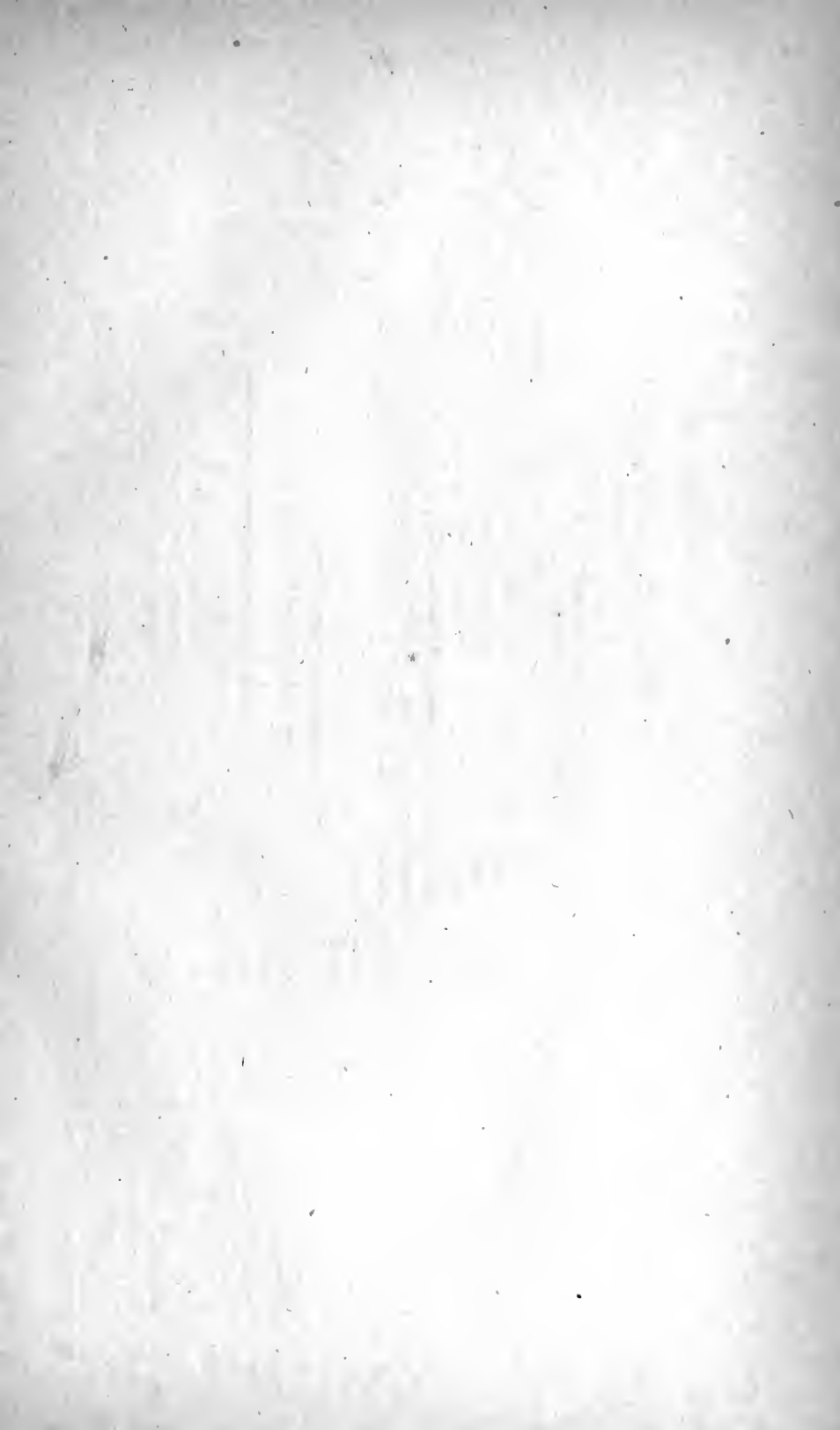
Of Births.	Married.	Of Deaths.
25.8.....	19.2.....	25.3.....

The following exhibit will show the number of births, marriages and deaths among the colored population of Rhode Island, during 10 years, from 1861 to 1870, inclusive; 10 years, from 1871 to 1880, inclusive; and for the last nine years, from 1881 to 1889, inclusive, as well as the aggregate of the same :

10 years, 1861-1870	1,131 births.....	557 marriages.....	1,153 deaths.
10 years, 1871-1880	1,615 births.....	705 marriages.....	1,573 deaths.
1881.....	192 births	84 marriages.....	186 deaths.
1882.....	179 births.....	74 marriages.....	145 deaths.
1883.....	197 births.....	52 marriages.....	166 deaths.
1884	185 births.....	70 marriages.....	187 deaths.
1885.....	199 births.....	69 marriages.....	183 deaths.
1886.....	212 births.....	85 marriages.....	198 deaths.
1887.....	211 births.....	97 marriages.....	203 deaths.
1888	202 births.. ..	69 marriages.....	200 deaths.
1889.....	194 births.....	75 marriages*.....	190 deaths.
<hr/>			
Last 9 years.....	1,771 births.....	675 marriages.....	1,658 deaths.
Total, 29 years.....	4,517 births.....	1,937 marriages.....	4,384 deaths.
Excess of births over deaths during the twenty-nine years			133

During the first ten years (1861-1870) there were twenty-two more deaths than births; during the second ten (1871-1880) forty-two more births than deaths; during the last nine years (1881-1889) one hundred and thirteen more births than deaths. For the whole twenty-nine years there was an average excess of less than five births a year. For the last nine years the excess of births over the deaths have averaged nearly thirteen per year. During the last year, however, it will be noticed that the number of births was only four more than the deaths.

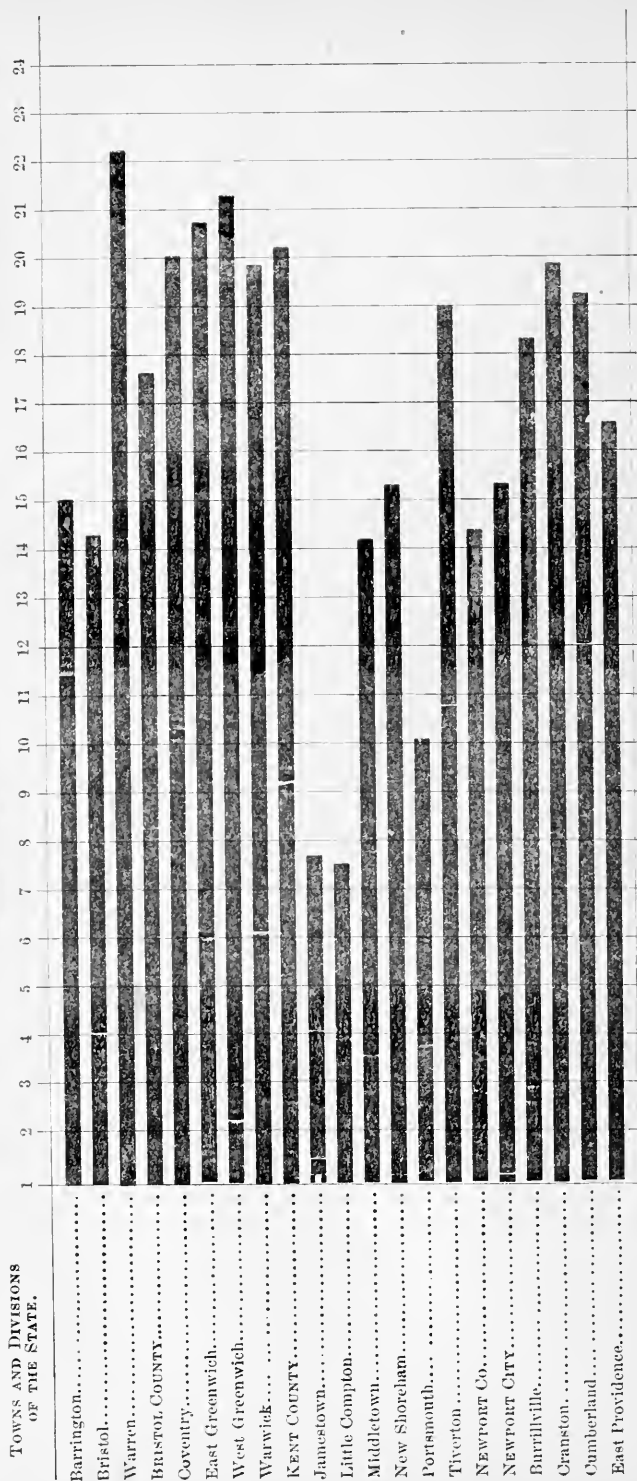
*Including five marriages in which one of the parties was white: one groom and four brides.

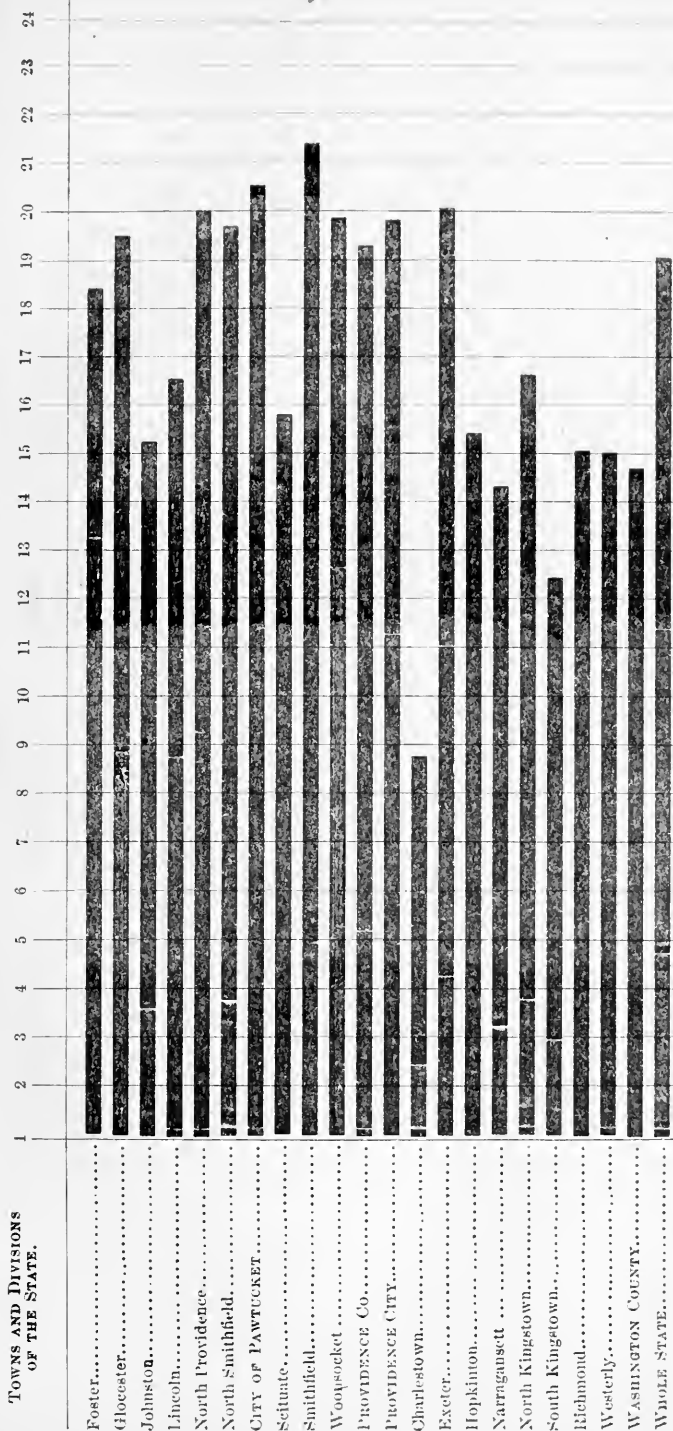


DEATH RATES.

Diagram II.—Showing the number of deaths in every 1000 of the population, in each town and each county in the State during the year 1889, computed upon the population as estimated by the town authorities.

For explanation see foot note on next page.





The figures at the top of the perpendicular lines indicate, in whole numbers, the number of deaths during the year in every 1000 persons. The spaces are fractional parts of one. For instance, the heavy horizontal line against Bristol, near the top of this diagram, reaches across about three-tenths of the space between the perpendicular lines 14 and 15. It shows the death rate of Bristol, in 1889, was about fourteen and three-tenths in every 1000 of the population, according to estimation.

CAUSES OF DEATH, 1889.

The statistics of the causes of death in Rhode Island, in 1889, may be found in Tables VII, VIII, IX and X. The whole number of deaths, as previously stated, was 6,259. The number of which the cause of death was reported was 6,220, and the number of which the cause was not stated was 39.

The following Table shows the number of deaths in 1889, in each large division of the State, and the number and proportion in each division from which causes were reported unknown :

TABLE LVII.

1889.	Bristol County.	Kent County.	Newport County Towns.	Providence County Towns.	Washington County.	Newport City.	Pawtucket.	Providence City.	Woonsocket.	Whole State.
Number of Deaths.....	208	457	119	1,349	338	323	524	2,516	425	6,259
Cause not stated.....	...	3	1	10	1	1	2	21	1	39
One in. ....	.....	152	119	134.9	338	323	262	120	425	160

TABLE LVIII.

Proportion of Deaths reported with "Cause Unknown" in each Division of the State, and in the whole State, for a period of thirty-five years, from 1855 to 1889, inclusive, arranged in seven periods of five years each, and in each of the last fifteen years.

YEARS.	STATE DIVISIONS.							In every 1000 Deaths.
	Bristol County.	Kent County.	Newport County.	Providence County Towns.*	Providence City.	Washington County.	Whole State.	
1855-1859, One in every....	19.8	7.6	15.4	5.8	34.3	5.3	9.0	111.1
1860-1864, One in every.....	25.7	10.6	17.8	8.4	35.3	25.1	14.7	68.0
1865-1869, One in every.....	60.2	12.6	28.7	7.1	58.8	21.3	14.0	71.4
1870-1874, One in every.....	43.7	27.5	16.2	10.8	84.6	19.0	19.2	52.1
1875, One in every.....	55.0	7.4	15.6	13.7	91.2	11.9	20.9	47.8
1876, One in every.....	11.5	7.9	18.5	9.9	124.3	22.8	19.3	45.8
1877, One in every.....	201.0	17.7	9.7	11.9	323.0	16.0	23.2	43.1
1878, One in every.....	32.1	7.4	9.0	13.7	124.2	21.7	21.1	47.4
1879, One in every.....	16.6	9.2	12.4	9.5	225.1	8.6	17.6	56.8
1875-1879, One in every.....	63.2	9.9	13.0	11.7	177.6	16.2	20.4	49.0
1880, One in every.....	21.9	23.5	13.5	10.5	122.3	17.8	20.7	48.3
1881, One in every.....	204.0	13.0	11.2	7.3	143.0	6.5	14.4	69.4
1882, One in every.....	37.6	11.6	10.9	10.6	187.0	7.7	18.8	53.2
1883, One in every.....	40.4	15.9	15.0	15.3	392.8	17.0	28.4	36.2
1884, One in every.....	100.0	40.0	81.6	91.7	372.1	94.0	122.4	8.2
1880-1884, One in every.....	80.8	20.8	26.4	27.1	243.4	28.6	40.9	24.5
1885, One in every.....	185.0	355.0	137.0	45.6	309.1	52.2	91.3	10.9
1886, One in every.....	110.5	192.5	86.0	87.0	195.1	55.2	113.7	7.9
1887, One in every.....	212.0	343.0	73.5	782.6	264.0	351.0	333.7	3.0
1888, One in every.....	251.0	408.0	152.7	164.3	293.8	368.0	235.7	4.3
1889, One in every.....	208.0	152.0	221.0	176.7	120.0	338.0	160.0	6.2
1885-1889, One in every.....	493.5	389.0	134.0	251.2	236.4	233.0	186.8	6.4

* Not including Providence City.

The average annual proportion of deaths in the whole State, reported with cause unknown during the first ten of the above thirty-five years, that is, from 1855 to 1864, inclusive, was one in every 11.8; or 89.5 in every one thousand decedents.

The average annual proportion of the same, for the last four years, was one in every 212, or less than 5 in every one thousand decedents, showing great improvement in the complete filling out of the returns.

The following will show the average of deaths (in every one thousand) reported with cause unknown, during the last four quinquennial periods:

Quinquennials ending.....	1874,	1879,	1884,	1889.
Average.....	52.1.....	49.0.....	24.5.....	6.4

It is probable that the returns during the last five years have been as complete, approximately if not absolutely, as can ever be expected.

There must necessarily be some deaths, every year, of which the exact cause cannot be positively known.

TABLE LIX.

Exhibiting the Order in regard to Number and Proportion of Decedents from Thirteen Principal Causes of Death.

1889.	1888.	1887.	1886.	1885.	1884.	June 1st, 1882, to Dec. 31st, 1882—30 yrs. 7 mos. 7 months.	Per 1000 of Whole No of Deaths, 30 years, 7 months.
Whole Number.....6,259	Whole Number....6,594	Whole Number....6,340	Whole Number....5,849	Whole Number....5,389	Whole Number....5,141	Whole Number. 101,230	
Consumption.....727	Consumption.....800	Consumption.....710	Consumption.....896	Consumption.....781	Consumption.....739	Consumption.....16,025	158.3
Pneumonia.....483	Pneumonia.....508	Pneumonia.....488	Pneumonia.....481	Pneumonia.....467	Pneumonia.....363	Pneumonia.....6,099	60.2
Heart, Diseases of...460	Heart, Diseases of...467	Brain, Diseases of...440	Cholera Infantum...377	Heart, Diseases of...349	Cholera Infantum...325	Old Age.....5,408	53.4
Cholera Infantum...396	Heart, Diseases of...436	Heart, Diseases of...406	Apoplexy and Paralysis.....333	Apoplexy and Paralysis.....289	Apoplexy and Paralysis.....298	Cholera Infantum 5,143	50.8
Apoplexy and Paralysis.....323	Apoplexy and Paralysis.....367	Cholera Infantum...355	Heart, Diseases of...330	Cholera Infantum...279	Old Age.....293	Scarlatina.....4,398	43.4
Bronchitis.....200	Old Age.....290	Apoplexy and Paralysis.....328	Old Age.....276	Old Age.....267	Heart, Diseases of...285	Dysentery and Diarrhoea.....4,310	41.5
Old Age.....227	Brain, Diseases of...284	Diphtheria.....237	Diphtheria.....228	Brain, Diseases of...189	Diarrhoea and Dysentery.....194	Heart, Diseases of 3,947	39.0
Accidents.....216	Fever, Typhoid....235	Old Age.....278	Accidents.....189	Cancers.....193	Accidents.....180	Fever, Typhoid, &c.....3,755	37.1
Kidney, Diseases of 210	Bronchitis.....228	Scarlatina.....266	Brain, Diseases of...182	Accidents.....173	Fever, Typhoid, &c.....165	Apoplexy and Paralysis.....3,527	34.8
Cancer.....189	Kidney, Diseases of 213	Accidents.....206	Bronchitis.....174	Fever.....158	Cancers.....156	Accidents, all kinds.....3,018	30.8
Brain, Diseases of...189	Scarlatina.....207	Bronchitis.....176	Fever.....169	Diarrhoea and Dysentery.....120	Brain, Diseases of...148	Diphtheria*.....2,949	*20.1
Diphtheria.....184	Cancer.....193	Kidney, Diseases of...169	Cancers.....163	Diphtheria.....99	Convulsions.....139	Convulsions and Fits.....2,203	21.7
Diarrhoea and Dysentery.....159	Diphtheria.....191	Cancers.....159	Kidneys, Disease of...155	Scarlet Fever.....91	Diphtheria.....119	Croup.....2,013	19.8

*25 years, 1858 to 1882, inclusive.

Compared with the previous year, the deaths from consumption fell off ten per cent. in number, notwithstanding the increase of population, and the proportion to population was doubtless less than in any year within the present century, and certainly in any year since the commencement of the registration of diseases.

In number of decedents, pneumonia fell off about five per cent.; cholera infantum, fifteen per cent.; apoplexy and paralysis, twelve per cent.; old age, twenty-five per cent.; brain, diseases of, thirty per cent.; typhoid fever, thirty-nine per cent.; malarial fevers, forty-three per cent.; scarlatina, seventy-five per cent.

Deaths from diphtheria, diarrhoeal diseases, cancer, croup, peritonitis, diseases of the kidneys and liver, did not vary very much in number during the last two years.

Bronchitis had a larger mortality during 1889 than in the previous year, by about twelve per cent.; accidents, by eight per cent.; and whooping cough by forty-two per cent.



COMPARATIVE STATISTICS

AND

COMMENTS.

In the preceding pages there have been presented, numerically and in tabular form, the various causes of death in Rhode Island, in 1889. In Tables VII and VIII they were presented at considerable length, in various specific terms; in Table IX more or less grouped in a general nosological arrangement; and in Table X the same for a period of thirty-six years.

In Table VII the number of deaths from *each cause* and of *each sex* is shown, for *each month* in the year, and the *parentage* of the decedents from *each cause* during the year.

In Table VIII the number of decedents of *each sex* from *each cause*, in the *different periods of life* is given.

In Table IX, with the classification and percentage of causes of death, the number of each general cause, in each division of larger population, is given.

In Table X a nosological summary of causes of death for the whole State, in each of thirty-six years, is given.

Table LX is a compend in part of Tables VII, VIII and IX previously alluded to, and contains the particulars of the most important causes of death in 1889, and comprise the principal causes which will be commented upon in the following pages :

TABLE LX.

Presenting the most prominent Causes of Death, with Sex, Parentage, Season, Age and Locality.

	Accidents.	Apoplexy and Paralysis.	Brain Diseases.	Bronchitis.	Cancer.	Cholera Infantum.	Consumption.	Croup.	Diarrhea.	Diphtheria.	Dysentery.	Enteritis.	Fevers, Malarial, etc.	Fevers, Typhoid, etc.	Heart Diseases.	Kidney Diseases.	Liver Diseases.	Old Age.	Peritonitis.	Pneumonia.	Scarlet Fever.	Tuberculosis.	Whooping Cough.
Total Mortality.....	216	323	189	260	189	396	727	80	88	184	71	109	40	143	460	210	70	227	63	483	51	40	77
{ Males.....	146	140	91	128	65	209	356	37	44	80	29	55	14	85	233	119	30	75	22	255	24	16	39
{ Females.....	70	183	98	132	124	187	371	43	44	104	42	54	26	58	227	91	40	152	41	228	27	24	38
{ Native.....	88	204	96	90	104	132	230	24	34	89	33	56	8	56	258	122	31	136	26	213	14	17	36
{ Foreign.....	128	119	93	170	85	264	488	56	54	95	38	53	32	87	202	88	39	91	37	270	37	23	41
{ January.....	17	32	13	25	16	3	74	6	2	19	2	5	....	8	42	14	5	19	9	55	6	....	5
{ February.....	12	34	12	42	20	3	48	12	4	15	2	7	2	15	44	17	3	19	5	69	6	5	3
{ March.....	16	23	14	39	17	2	58	14	2	21	....	3	3	4	37	20	4	23	7	92	4	4	14
{ April.....	16	30	16	26	9	1	62	4	1	16	....	5	3	11	33	16	3	16	3	69	13	6	1
{ May.....	18	32	13	19	13	3	56	6	2	18	2	6	5	2	31	19	8	16	2	36	6	3	5
{ June.....	18	30	23	12	22	40	62	5	4	6	3	5	2	5	31	16	6	19	8	24	2	3	9
{ July.....	25	24	14	13	13	136	61	3	32	12	9	15	6	9	25	23	8	18	7	14	5	2	10
{ August.....	25	22	15	13	20	116	57	3	23	7	24	25	9	16	38	21	6	18	4	24	2	4	11
{ September.....	11	22	17	8	17	62	66	3	8	19	19	14	5	19	40	16	11	21	6	13	3	6	8
{ October.....	17	29	20	14	14	22	56	7	8	16	6	6	4	23	52	18	9	25	4	27	2	..	5
{ November.....	24	23	19	19	11	3	58	8	1	17	3	11	1	20	36	14	4	15	5	27	1	3	2
{ December.....	17	22	13	30	17	5	69	8	1	18	1	7	1	11	39	16	3	18	3	39	1	4	4

PAR'AGE.

SEASON.

SEX.

TABLE LX.—CONTINUED.

LOCALITIES.	AGES.	CAUSES OF DEATH.															Whooping Cough.							
		Accidents.	Apoplexy and Paralysis.	Brain Diseases.	Bronchitis.	Cancer.	Cholera Infantum.	Consumption.	Croup.	Diarrhoea.	Diphtheria.	Dysentery.	Enteritis.	Fever, Malarial, etc.	Fever, Typhoid, etc.	Heart Diseases.		Kidney Diseases.	Liver Diseases.	Old Age.	Peritonitis.	Pneumonia.	Scarlet Fever.	Tuberculosis.
{	Under 5 years.	32	4	97	136	1	395	22	70	58	109	28	65	4	9	20	7	2	...	4	120	37	8	73
	5 and under	12	2	13	3	...	...	7	9	1	53	2	6	4	9	7	1	...	...	1	14	9	3
	10 "	3	...	4	1	...	...	9	1	...	15	3	...	1	12	8	3	...	...	2	3	2	1
	15 "	9	...	5	6	1	...	95	...	...	1	...	4	2	29	10	8	...	...	5	20	1	...
	20 "	32	6	6	9	7	...	228	...	1	2	...	3	5	41	25	11	1	...	10	27	2	12	
	30 "	24	11	10	11	8	...	157	...	...	...	1	6	4	18	37	26	10	...	11	36	...	9
	40 "	32	36	15	9	29	...	87	...	4	2	5	6	7	8	45	31	14	...	10	51	...	2	
	50 "	20	45	15	21	50	...	47	...	4	1	6	3	5	9	69	40	17	...	5	57	...	2	
	60 "	17	87	9	22	41	...	39	...	6	...	13	7	4	5	85	39	12	...	5	77	...	1	
	70 "	19	92	11	25	40	...	25	...	3	...	4	6	3	3	118	35	7	...	5	47	...	...
{	80 and over.	12	39	4	17	11	...	9	...	11	...	6	4	...	...	35	14	7	...	2	31	...	...
	Not stated.	3	1	...	...	1	1	2	...	...	...	...	...	1	...	1	...	...	...	1	...	...	...
		
{	Bristol County.	2	23	5	4	4	18	20	3	1	3	...	4	1	2	19	14	1	...	5	18	3	1	
	Kent County.	14	32	12	8	10	32	45	15	4	10	8	6	2	17	31	13	...	...	23	37	2	13
	Newport County Towns.	6	7	6	4	5	5	11	...	4	2	1	1	...	2	9	2	...	...	6	8	4	...
	Newport City.	7	21	11	14	8	15	26	1	5	9	...	5	1	...	30	13	8	...	...	21	...	...
	Providence County Towns.	49	65	42	53	35	80	140	15	16	29	22	24	9	28	97	38	11	...	41	114	6	8	
	Pawtucket.	15	23	16	32	14	31	60	4	20	17	3	4	4	10	31	12	9	...	5	39	4	1	
	Providence City.	101	106	78	110	82	116	315	33	26	97	24	52	23	60	199	96	29	...	23	208	25	43	
	Woonsocket	9	13	14	24	8	88	57	8	6	10	4	5	...	...	15	12	2	...	7	16	...	...
	Washington County.	13	33	5	11	23	11	53	1	9	7	2	8	...	9	29	10	...	...	3	22	1	...
		

† 31, Enterocolitis.

DEATHS FROM ACCIDENTS.

The number of deaths from accidental causes of all kinds, reported in Rhode Island, in 1889, was 216. This number is 26 more than during 1888.

Among the 216 deaths from accident there were 9 from asphyxia; 20 from burns and scalds; 52 from drowning; 31 from falls; 25 from fractures and contusions of various kinds; 7 from poison; 23 from accidents of various forms on railroads; and 49 from numerous other accidental circumstances.

Of the whole number of deaths by accident 146 were males, and 70 were females; 88 were of native, and 128 were of foreign parentage.

Of the sexes the proportion was 67.6 per cent. of male decedents to 32.4 per cent. of female decedents.

Of parentage, 60 per cent. was of foreign, and 40 per cent. of native.

The number of deaths in each division of the year was as follows :

First Quarter.....	45	Third Quarter.....	61
Second Quarter.....	52	Fourth Quarter.....	58
—		—	
First half.....	97	Second half.....	119
Whole Year...		216	

In regard to periods of life, the decedents from accidental causes were divided as follows: Under 5 years, 32; 5 and under 10, 12; between 10 and 20, 12; between 20 and 40, 56; between 40 and 60, 52; over 60, 49; and 3, age not stated.

In regard to sectional divisions of the State, 2 of the deaths from accidental causes were in Bristol county; 14 in Kent county; 13 in Newport county; 13 in Washington county, and 174 in Providence county.

The whole number of deaths from accidental causes, in 1889, *in proportion to the whole number of deaths* from specified causes, in the State, was about 41 in every one thousand.

In the following Table may be found the number, sex, parentage and locality of mortality from accidents, for twenty-five years, ending December 31, 1889:

TABLE LXI.

Mortality in the State from Accidents, with the Percentage of the Whole Number of Deaths; Sex, Parentage and Locality, for twenty-five years, from 1865 to 1889, inclusive, in three periods of five years each, and for each of the last ten years.

YEARS.	Whole Number.	VARIETIES.								Per cent.	SEX.		PARENT-AGE.		STATE DIVISIONS.					
		Burns and Scalds.	Drowning.	Falls.	Fractures and Contusions.	Poisoning.	Railroad.	Suffocation.	Various and Unspecified.		Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
5 years, 1865-1869.	515	81	114	70	..	14	32	1	203	3.31	397	118	245	270	26	36	52	192	166	43
5 years, 1870-1874.	612	73	159	89	..	17	68	10	196	3.16	493	119	284	328	22	45	49	219	233	44
5 years, 1875-1879.	658	71	168	75	..	31	52	19	242	3.02	487	171	283	375	20	45	50	192	303	48
1880.....	146	21	33	14	..	5	18	...	55	3.02	108	38	57	89	5	17	10	29	71	4
1881.....	155	16	29	19	..	9	20	19	43	3.09	107	48	62	93	5	17	12	60	56	5
1882.....	178	17	40	31	..	6	16	8	60	3.50	130	48	72	106	5	9	15	60	80	9
1883.....	153	18	27	21	..	6	16	12	53	2.84	117	36	61	92	4	8	9	63	66	3
1884.....	197	20	41	31	..	7	16	11	71	3.82	147	50	90	107	5	19	14	65	76	18
5 years, 1880-1884.	829	92	170	116	..	33	86	50	282	3.26	609	220	342	487	24	70	60	287	349	39
1885.....	173	19	42	25	..	9	15	9	54	3.20	135	38	72	101	5	6	8	58	83	13
1886.....	190	23	58	19	..	6	20	9	55	3.25	141	49	84	106	16	11	16	62	72	13
1887.....	206	17	39	17	23	7	24	14	65	3.24	158	48	92	114	5	11	23	81	71	15
1888.....	190	27	46	18	8	12	25	8	46	2.87	145	45	63	127	4	6	14	70	88	8
1889.....	216	20	52	31	25	7	23	9	46	4.10	146	70	88	128	2	14	13	73	101	13
5 years, 1885-1889.	975	106	237	110	56	41	107	49	266	3.55	725	250	399	576	32	48	74	344	415	62
Total, 25 years....	3589	423	848	460	56	136	345	129	1189	3.26	2711	878	1553	2036	124	244	285	1334	1466	236

* Exclusive of Providence City.

TABLE LXII.

Mortality in the State from Alcoholism, with the Percentage of the Whole Number of Deaths, Sex, Parentage and Locality, for twenty-five years, from 1865 to 1889, inclusive.

YEARS.	Number of Deaths from Alcoholism.	Per cent.	SEX.		PARENTAGE.		STATE DIVISIONS.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
5 years, 1865-1869.	55	.38	48	7	27	28	1	4	5	12	29	4
5 years, 1870-1874.	93	.51	74	19	40	53	4	7	9	33	37	3
5 years, 1875-1879.	81	.39	56	25	27	54	2	4	7	17	48	3
1880.....	15	.32	9	6	5	10	1	.....	1	4	8	1
1881.....	24	.51	17	7	5	19	1	.....	1	7	14	1
1882.....	28	.58	16	12	8	20	.....	.....	.....	9	18	1
1883.....	29	.54	17	12	7	22	.....	1	1	10	16	1
1884.....	27	.53	19	8	10	17	.....	1	4	9	12	1
1880-1884.....	123	.50	78	45	35	88	2	2	7	39	68	5
1885.....	22	.41	16	6	6	16	2	1	.....	11	7	1
1886.....	12	.20	9	3	2	10	1	.....	1	3	7	.....
1887.....	16	.25	14	2	4	12	2	2	2	5	4	1
1888.....	16	.32	10	6	5	11	.....	.....	2	5	9	.....
1889.....	31	.50	23	8	12	19	2	1	1	13	14	.....
1885-1889.....	97	.34	72	25	29	68	7	4	6	37	51	2
Total, 25 years...	449	.42	328	121	158	291	16	21	34	138	223	17

* Pawtucket and Woonsocket included.

APOPLEXY AND PARALYSIS.

There were 323 deaths from apoplexy and paralysis in Rhode Island, in 1889, according to the returns. The number reported is 44 less than in the year 1888.

Of the sexes, there were 140 males and 183 females.

Of parentage, 204 were of native parentage, and 119 of foreign.

The native population has steadily been, in a very large proportion, more prone to apoplexy than the foreign, or the children of the foreign population.

The following Table will present the sex, parental and local relations of apoplexy and paralysis, as causes of death, during the last twenty-five years :

TABLE LXIII.

Presenting the Whole Number and Percentage of the Deaths in the State, from Apoplexy and Paralysis combined; and also the Sex and Parentage of the Decedents from these causes, and the Number of the same in each of the Counties, from 1865 to 1889, inclusive.

YEARS	APOPLEXY AND PARALYSIS.												
	Whole Number of Deaths.	Number from Apoplexy and Paralysis.	Per cent.	SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
				Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865 ...	3,405	100	2.93	52	48	81	19	9	8	14	23	38	8
1866	2,970	92	3.09	46	46	80	12	7	5	17	24	29	9
1867	2,889	124	4.29	59	65	101	23	9	9	13	35	49	9
1868	2,912	111	3.81	56	55	86	25	9	6	19	27	46	4
1869 ...	3,382	117	3.46	55	62	92	25	12	13	18	20	48	6
1870	3,238	130	4.32	68	62	105	25	14	10	10	39	52	5
1871	3,344	156	4.66	73	83	113	43	10	17	15	40	61	13
1872	4,247	125	2.97	62	63	96	29	17	9	10	27	52	10
1873	4,403	134	3.04	59	75	109	25	9	8	17	26	57	17
1874	4,229	156	3.69	84	72	120	36	14	10	16	42	59	15
1875	4,317	166	3.61	79	87	133	33	7	13	17	46	75	8
1876	4,116	165	4.01	79	86	130	35	13	11	13	45	68	1
1877	4,450	181	4.07	87	94	123	58	10	10	16	52	74	19
1878	4,441	188	4.23	104	84	145	43	12	16	21	58	66	15
1879	4,472	220	4.92	114	106	146	74	12	9	29	71	89	10
1880	4,829	215	4.67	109	106	157	58	18	13	22	71	78	13
1881	5,016	244	4.86	116	128	170	74	17	15	25	70	101	16
1882	5,074	265	5.22	139	126	168	97	15	29	25	65	117	15
1883	5,282	275	5.22	138	137	192	83	11	28	22	75	118	21
1884 ...	5,141	298	5.80	135	163	176	122	21	14	28	108	105	22
1885	5,389	289	5.38	144	145	183	106	16	18	28	99	110	18
1886	5,849	333	5.70	173	160	230	103	11	27	32	108	120	35
1887	6,340	328	5.17	161	167	213	115	21	27	23	101	128	28
1888	6,594	367	5.41	164	203	234	133	29	26	29	113	137	33
1889	6,259	323	5.17	140	183	204	119	23	32	28	101	106	33
Total...	112,583	5,102	4.53	2,478	2,624	3,587	1,515	347	383	506	1,486	1,983	397

* Not including Providence city.

Table LXIII shows a large proportional as well as actual increase of deaths from apoplexy and paralysis, during the twenty-five years.

The proportions, however, have not varied much during the last eight years.

TABLE LXIV.

Ages of Decedents from Apoplexy and Paralysis, in each of the last twenty-five years.

APOPLEXY AND PARALYSIS.	PERIODS OF LIFE.								
	Under 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Not stated.
1865.....		3	5	6	19	20	28	19	.....
1866.....	1	1	7	16	9	24	27	7	.....
1867.....	2	.....	6	6	15	38	40	17	.....
1868.....	2	3	3	11	16	27	31	16	2
1869.....	1	1	5	12	20	28	34	15	1
1870.....	4	1	10	9	12	33	41	20	.....
1871.....	3	4	7	14	21	46	45	15	1
1872.....	1	4	5	17	20	26	41	11	.....
1873.....	2	3	4	14	22	35	37	16	1
1874.....	1	2	9	9	30	39	40	25	1
1875.....	6	2	8	19	23	40	45	22	1
1876.....	4	4	4	13	25	43	49	23	.....
1877.....	1	2	9	12	24	50	61	22	.....
1878.....	4	2	7	14	41	40	53	26	1
1879.....	4	6	11	18	27	57	59	38	1
1880.....	1	2	8	18	21	59	70	34	2
1881.....	1	7	11	20	36	55	70	42	2
1882.....	4	5	14	28	41	57	77	38	1
1883.....	8	4	11	19	45	56	83	49	.....
1884.....	10	7	16	21	32	68	95	45	4
1885.....	8	5	7	25	29	76	94	44	1
1886.....	7	8	10	25	52	65	112	51	3
1887.....	12	6	13	26	50	90	96	9	1
1888.....	10	4	18	29	61	85	100	8	1
1889.....	6	6	11	36	45	87	92	39	1
Total.....	103	82	219	437	736	1,244	1,509	651	25

BRAIN DISEASES.

The number of decedents from diseases of the brain proper, for 1889, was 189.

Of the 189 decedents, 91 were males, and 98 were females.

In regard to parentage, 96 were of native, and 93 of foreign parentage.

The deaths in the different seasons of year were as follows :

First Quarter.....	39	Third Quarter.....	46
Second Quarter.....	52	Fourth Quarter.....	52
<hr/>			
First half.....	91	Last half.....	98
<hr/>			
Whole number.....		189	

It is in accordance with the rule that the smallest number of deaths from diseases of the brain, not including apoplexy, should occur in the first quarter of the year.

Brain diseases occur largely in children. Of the 189 decedents from those causes, in 1889, 97 were under five years of age, and 13 were from five to ten years of age.

The following Table will present the statistics of mortality from diseases of the brain, for twenty-five years :

TABLE LXV.

Mortality in the State from Brain Diseases, with the Percentage of the Whole Number of Deaths, Sex, Parentage and Locality, for twenty-five years, from 1865 to 1889, inclusive.

YEARS.	Number of Deaths from Brain Diseases.	Per cent.	SEX.		PARENTAGE.		STATE DIVISIONS.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865-1869.....	444	2.85	243	201	281	163	17	23	37	128	209	30
1870-1874.....	584	2.99	317	267	335	249	13	31	44	168	314	14
1875.....	118	2.73	63	55	69	49	3	6	5	30	65	9
1876.....	150	3.64	92	58	89	61	3	11	7	39	85	5
1877.....	160	3.59	88	72	91	69	3	7	11	49	85	5
1878.....	142	3.19	75	67	76	66	1	13	12	45	68	3
1879.....	163	3.65	82	81	88	75	3	13	15	51	75	6
1875-1879.....	733	3.36	400	333	413	320	13	50	50	214	378	28
1880.....	164	3.39	87	77	89	75	3	6	12	56	81	6
1881.....	186	3.69	103	83	85	101	7	11	14	58	91	5
1882.....	181	3.50	93	88	92	89	4	10	10	71	80	6
1883.....	187	3.54	96	91	100	87	8	14	15	52	94	4
1884.....	148	2.88	90	58	77	71	4	9	8	41	83	3
1880-1884.....	866	3.40	469	397	443	423	26	50	59	278	429	24
1885.....	189	3.51	98	91	94	95	2	11	20	53	100	3
1886.....	182	3.09	108	74	84	98	4	14	13	69	78	4
1887.....	203	3.21	120	83	103	100	8	9	14	75	95	2
1888.....	212	3.21	114	98	109	103	4	19	12	76	90	11
1889.....	189	3.58	91	98	96	93	5	12	17	72	78	5
1885-1889.....	975	3.30	531	444	486	489	23	65	76	345	441	25
Total, 25 years..	3,602	3.65	1,960	1,642	1,958	1,644	92	219	266	1,133	1,771	30

* Providence city not included.

N. B. Cerebro spinal meningitis, hydrocephalus, tubercular meningitis and insanity not included in the above Table.

BRONCHITIS.

The number of decedents, in 1889, whose deaths were reported as having been caused by bronchitis, was 260. This is a considerably larger number than was ever before returned in a single year.

Increased expertness on the part of physicians, in the differential diagnosis of lung diseases, must account in part for the increased number of decedents from bronchitis.

Of the 260 decedents 128 were males, and 132 were females; or at the rate of 98 males to each 100 females.

In relation to parentage, 90 were of native, and 170 of foreign parentage.

In regard to age, 136 of the decedents were under 5 years of age, 10 were between 5 and 20 years, 20 between 20 and 40 years, 30 between 40 and 60 years, and of the remaining 64 decedents above 60 years of age, there were 42 deaths from chronic bronchitis.

During the first four months of the year the decedents from bronchitis numbered 132; during the last four months the number was 71.

The following Table will show various facts in relation to the mortality from bronchitis, for twenty-five years:

TABLE LXVI.

Mortality in the State from Bronchitis, twenty-five years, from 1865 to 1889, inclusive.

YEARS.	BRONCHITIS.											
	Number of Deaths.	Per cent.	SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865.	9	.27	4	5	6	3	1	.....	3	.....	5	.....
1866.	14	.51	3	11	10	4	.....	1	2	7	4	.....
1867.	19	.71	8	11	10	9	1	2	1	5	10	.....
1868.	20	.76	9	11	7	13	.....	1	2	5	10	2
1869.	20	.65	8	12	9	11	.....	.....	1	4	15	.....
1870.	26	.84	15	11	11	15	.....	.....	8	8	17	.....
1871.	24	.78	10	14	11	13	.....	1	1	5	17	.....
1872.	25	.65	10	15	11	14	1	1	1	6	16	.....
1873.	27	.64	12	15	11	16	.....	.....	1	7	18	1
1874.	39	.96	22	17	12	27	.....	.....	.....	6	32	1
1875.	57	1.39	32	25	29	28	.....	.....	1	21	33	2
1876.	57	1.46	23	34	26	31	.....	2	.....	7	46	2
1877.	69	1.62	32	37	35	34	1	1	1	22	44	.....
1878.	80	1.89	30	50	37	43	1	2	6	22	48	1
1879.	62	1.47	31	31	31	31	1	1	5	21	34	.....
1880.	91	1.98	49	42	44	47	1	6	6	21	56	1
1881.	84	1.80	48	36	39	45	1	1	2	25	53	2
1882.	100	2.08	39	61	47	53	3	2	6	25	60	4
1883.	111	2.10	56	55	51	60	5	2	3	41	57	2
1884.	118	2.29	58	60	40	78	7	.....	8	42	62	.....
1885.	168	3.08	82	86	91	77	5	3	13	71	76	.....
1886.	174	2.96	75	99	81	93	3	4	9	74	83	1
1887.	176	2.77	90	86	60	116	3	6	19	63	84	1
1888.	228	3.45	105	123	79	149	3	4	17	110	88	6
1889.	260	4.20	128	132	90	170	4	8	18	109	110	11
Total, 25 years..	2,058	1.83	979	1,079	878	1,180	41	48	127	728	1,078	37

* Not including Providence city.

CANCER.

There were 189 decedents, in 1889, whose deaths were caused by cancer, according to the returns. The term cancer includes all the various kinds, and in whatever place located.

The varieties of cancer, as reported, may be found in Tables VII and VIII, on pages 20 and 33. They are classed in Table IX as follows: Cancer in various localities, or cancer (various), 88; cancer of the breast, 19; of the liver, 22; of the stomach, 38; of the uterus, 22.

In 1889 the deaths from cancer, in the several divisions of the year, were as follows:

First Quarter.....	53	Third Quarter.....	50
Second Quarter.....	44	Fourth Quarter.....	42
	—		—
First half.....	97	Last half.....	92
Whole Year.....189			

Sex.—Of the 189 decedents from cancer, 65 were males, and 124 were females; or 34 males and 66 females in every 100.

Parentage.—There were 104 of native parentage, and 85 of foreign.

The following Table will show the facts of mortality from cancer, in relation to sex, parentage and locality, for twenty-five years:

TABLE LXVII.

Mortality in the State from Cancer, from 1865 to 1889, inclusive.

YEARS.	CANCER.											
	Number of Deaths.	Percentage.	SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865.....	55	1.70	13	42	45	10	5	7	8	16	17	2
1866.....	64	2.29	17	47	57	7	7	5	7	13	27	5
1867.....	58	2.15	14	44	45	13	5	3	10	19	18	3
1868.....	60	2.29	21	39	45	15	.....	8	6	11	32	3
1869.....	66	2.14	19	47	56	10	2	5	7	19	27	6
1870.....	80	2.58	27	53	66	14	5	12	8	25	27	3
1871.....	66	2.13	25	41	47	19	.....	7	5	25	25	4
1872.....	95	2.46	26	69	66	29	4	7	9	21	50	4
1873.....	106	2.53	45	61	76	30	4	6	12	32	44	8
1874.....	87	2.13	23	64	67	20	4	6	12	24	38	3
1875.....	95	2.31	24	71	62	33	3	6	7	25	49	5
1876.....	106	2.72	27	79	72	34	5	6	8	27	53	7
1877.....	135	3.17	29	106	87	48	3	7	9	37	66	13
1878.....	119	2.82	38	81	79	40	5	11	8	37	48	10
1879.....	125	2.96	39	86	70	55	9	6	9	28	66	7
1880.....	125	2.72	45	80	73	52	5	10	12	26	68	4
1881.....	145	2.90	40	105	90	55	8	10	12	42	65	8
1882.....	132	2.75	40	92	82	50	5	15	9	43	52	8
1883.....	169	3.20	51	118	105	64	3	17	12	49	86	2
1884.....	156	3.05	39	117	88	68	2	18	21	41	70	4
1885.....	193	3.59	52	141	114	79	8	9	8	67	88	13
1886.....	162	2.77	42	120	75	87	6	11	9	37	87	12
1887.....	159	2.50	49	110	96	63	8	5	10	49	80	7
1888.....	193	2.93	67	126	128	65	9	10	12	57	88	17
1889.....	189	3.03	65	124	104	85	4	10	13	57	82	23
Total, 25 years..	2,940	2.60	877	2,063	1,895	1,045	119	217	243	827	1,353	181

* Providence city not included.

CHILD-BIRTH.

Under the head of "Child-birth" are included puerperal fever, puerperal convulsions, and whatever causes of death that may have occurred as the direct result of child-birth.

The number reported in 1889 was 41; 18 of which were from the immediate effects of child-birth, including metritis, hemorrhage, &c., 5 from septicæmia, 6 from puerperal convulsions, and 12 from puerperal fever.

Of the whole number 14 were of native and 27 of foreign parentage.

The proportion of decedents was about 20 per cent. less than in the previous year.

The following Table will present the various relations in regard to mortality from child-birth, for twenty-five years, 1865-1889:

TABLE LXVIII.

Mortality in the State from Child-Birth, with the Percentage of the Whole Number of Deaths, Parentage and Locality, for twenty-five years, from 1865 to 1889, inclusive.

YEARS.	Number of Deaths from Child Birth.	Per cent.	PARENTAGE.		STATE DIVISIONS.					
			Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865-1869.....	145	1.00	59	86	7	8	12	58	51	* 9
1870-1874.....	230	1.19	104	126	6	15	17	77	96	19
1875.....	53	1.30	26	27	1	6	1	10	31	4
1876.....	48	1.24	21	27	3	.....	1	18	23	3
1877.....	46	1.09	18	28	4	3	5	17	17	.....
1878.....	43	1.01	23	20	2	4	3	9	21	4
1879.....	43	1.02	21	22	1	7	2	6	23	4
1875-1879.....	233	1.13	109	124	11	20	12	60	115	15
1880.....	51	1.11	23	28	4	4	3	10	27	3
1881.....	60	1.28	26	34	1	1	3	22	29	4
1882.....	50	1.03	18	32	.....	5	1	16	27	1
1883.....	58	1.10	26	32	1	5	9	14	27	2
1884.....	47	.91	17	30	.....	3	3	19	18	4
1880-1884.....	266	1.09	110	156	6	18	19	81	128	14
1885.....	47	.87	21	26	.....	3	4	15	24	1
1886.....	41	.70	17	24	.....	4	4	15	17	1
1887.....	53	.71	15	38	.....	5	4	18	26	.....
1888.....	51	.77	13	38	.....	3	.....	25	20	3
1889.....	41	.65	14	27	1	5	2	16	13	4
1885-1889.....	233	.74	80	153	1	20	14	89	100	9
Total, 25 years.....	1,107	1.00	462	645	31	81	74	365	490	66

* Not including Providence city.

CHOLERA INFANTUM.

The number of deaths from cholera infantum, according to the returns for 1889, was 396.

Of the 396 decedents, 209 were males, and 187 were females.

Of parentage, 132 were of native, and 264 of foreign parentage; or 200 of foreign to every 100 of native parentage.

The mortality from cholera infantum, during 1889, was about 15 per cent. less than during the year 1888, but with that decrease was much larger than in any year previous to 1888.

As may be seen on the following page, the number of decedents from cholera infantum, during the twenty-five years from 1865 to 1889, inclusive, was 6,412.

The proportion to total mortality, for the period of twenty-five years, was 5.9 per cent. For 1888 the proportion was 7.8 per cent., and for 1889, 6.8 per cent.

There were 109 males to every 100 females among the decedents during the twenty-five years; and 132 decedents of foreign parentage to every 100 of native, during the same period.

The following Table shows the whole number of reported deaths from cholera infantum; the sex and parentage of the decedents; and the number in each of the larger divisions of the State, in each of the last twenty-five years:

TABLE LXIX.

Mortality from Cholera Infantum, twenty-five years.

YEARS.	CHOLERA INFANTUM.										
	Number of Deaths.	SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
		Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865.	145	63	82	61	84	17.	7	14	48	50	9
1866.....	110	67	43	50	60	1	7	8	39	47	8
1867.	117	64	53	62	55	4	3	7	45	49	9
1868.....	154	85	69	66	88	13	4	12	44	70	11
1869.	151	81	70	79	72	6	15	6	48	65	11
1870.....	213	106	107	95	118	15	15	13	69	93	8
1871.....	172	85	87	82	90	14	12	12	59	62	13
1872.....	391	195	196	167	224	16	16	21	157	151	30
1873.....	285	148	137	165	120	17	14	16	120	99	19
1874.....	265	140	125	115	150	4	12	5	84	134	26
1875.....	318	156	162	155	163	20	16	20	108	136	18
1876.....	250	131	119	105	145	5	12	29	68	124	12
1877.....	259	139	120	96	163	12	12	9	96	122	7
1878.....	168	96	72	73	95	7	14	7	64	71	5
1879.....	161	88	73	71	90	8	16	21	51	50	6
1880.....	247	123	124	109	138	13	11	10	93	100	20
1881.....	240	130	110	102	138	10	22	14	75	102	17
1882.....	325	173	152	133	192	20	11	19	132	130	13
1883.....	242	124	118	104	138	12	7	22	88	108	5
1884.....	325	177	148	130	186	10	12	26	114	144	19
1885.....	279	150	129	128	151	5	23	16	133	86	16
1886.....	377	179	198	143	234	4	29	15	194	120	35
1887.....	355	200	155	145	210	16	16	35	160	119	9
1888.....	467	239	228	184	283	18	35	28	219	149	18
1889.....	396	209	187	132	264	18	32	20	199	116	11
Total, 25 years.....	6,412	3,348	3,064	2,761	3,651	285	374	399	2,507	2,506	355

* Not including Providence city.

CONSUMPTION.

The decedents from consumption, during 1889, numbered 727. The number is 73 less than in the preceding year.

Sex.—Of these 727 decedents 356 were males, and 371 were females; giving 104.2 female decedents to every 100 male decedents; or 49 males and 51 females in every 100 decedents from consumption, an unusually small difference.

As a rule, for the period of twenty years, there are one hundred and twenty or more females to every 100 male decedents from consumption.

Parentage.—There were 239 decedents of native parentage, and 488 of foreign; a proportion of 200 of foreign parentage to every 100 of native.

Season.—The largest number of deaths in any one month, 74, occurred in January; the next largest, 69, in December; the smallest number, 48, in February.

The number in each quarter of the year was as follows:

First Quarter ..	180	Third Quarter..	184
Second Quarter.....	180	Fourth Quarter.....	183
First half.....	360	Last half.....	367
Whole Number.....		727	

The uniformity of the numbers in each quarter of the year is quite unusual.

Ages.—During 1889, of the 727 decedents from consumption, 228, or nearly one-third, were between the ages of 20 and 30; and 157, or more than one-fifth, were between the ages of 30 and 40.

In order to show more concisely the relation of age to mortality from consumption, during 1889, the following synopsis is presented:

Under 10 years of age	29
Between 10 and 20 years.....	104
Between 20 and 30 years.....	228
Between 30 and 40 years.....	157
Between 40 and 50 years.....	87
Between 50 and 70 years.....	86
Over 70 years.....	34
Not stated.....	2
Total.....	727

The following Table shows the total deaths from all reported *known causes*, with the *number* and *percentage* of deaths from consumption of the same, in each of the larger divisions of the State, and in the whole State, *in each of the last seventeen years*; and also the aggregate for a period of twenty-five years, from 1860 to 1884, inclusive:

CONSUMPTION. ·



STATISTICS OF COUNTIES.

NUMBER AND PERCENTAGE,

THIRTY YEARS.

TABLE LXX.—CONSUMPTION.—Number, Locality and Percentage.

COUNTIES.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	Total, 25 years, 1860-1884.
BRISTOL COUNTY.																		
Total deaths, stated causes	173	159	162	148	201	187	141	209	203	183	197	199	185	221	217	251	208	4,135
Consumption	16	18	21	19	27	23	16	19	25	36	19	21	12	23	20	28	20	543
Percentage	8.24	11.32	12.97	12.83	13.43	12.30	11.35	9.09	12.31	19.68	9.64	10.50	6.48	10.35	9.22	11.15	9.62	13.13
KENT COUNTY.																		
Total deaths, stated causes	241	252	263	209	251	249	277	293	313	288	283	268	355	385	343	408	454	6,206
Consumption	42	32	43	28	42	41	38	45	36	51	39	37	45	43	34	55	45	1,078
Percentage	17.43	12.69	16.35	13.39	16.73	16.47	13.72	15.35	11.20	17.71	13.78	13.43	12.70	11.20	9.91	13.44	9.84	17.37
NEWPORT COUNTY.																		
Total deaths, stated causes	366	221	277	280	243	265	330	324	346	378	401	403	408	433	435	458	440	7,869
Consumption	44	26	41	45	33	31	45	34	51	46	55	43	47	57	41	32	37	1,086
Percentage	12.02	11.77	14.80	16.07	13.58	11.69	13.64	10.40	14.74	12.17	13.72	10.67	11.52	13.16	9.19	7.00	8.41	13.80
PROVIDENCE COUNTY.*																		
Total deaths, stated causes	1,389	1,217	1,230	1,110	1,301	1,308	1,223	1,437	1,451	1,509	1,656	1,723	1,918	2,087	2,345	2,465	2,286	28,161
Consumption	197	186	201	211	222	229	197	189	220	224	257	248	273	276	246	273	257	4,799
Percentage	14.18	11.41	16.34	19.01	15.96	17.51	15.98	15.35	15.16	14.82	15.52	14.13	14.20	13.05	10.49	11.07	11.24	17.04

* Not including Providence city.

TABLE LXX—CONSUMPTION—Number, Locality and Percentage.—Continued.

COUNTIES.	1873	1874.	1875.	1876.	1877.	1878.	1879.	1880	1881.	1882.	1883.	1884.	1885	1886.	1888.	1889	Total, 35 years, 1860-1884.
PROVIDENCE CITY.																	
Total deaths, stated causes	1,725	1,965	1,894	1,850	1,932	1,973	2,017	2,063	2,130	2,230	2,351	2,227	2,157	2,341	2,630	2,644	39,195
Consumption	230	270	297	284	294	305	293	322	344	351	364	344	348	398	323	362	6,374
Percentage.....	13.33	13.74	15.68	15.35	15.22	15.46	14.53	15.60	16.15	15.73	15.48	15.43	16.10	15.65	12.23	13.66	16.26
WASHINGTON COUNTY.																	
Total deaths, stated causes	292	263	284	306	240	249	220	270	226	215	208	279	307	331	351	368	5,711
Consumption	51	44	47	68	43	47	48	33	30	29	32	46	56	59	46	50	1,031
Percentage.....	17.47	16.73	16.55	22.22	17.91	18.88	21.32	12.22	13.27	13.49	15.40	16.28	17.93	17.52	13.10	13.58	18.05
WHOLE STATE.																	
Total deaths, stated causes	4,186	4,077	4,110	3,903	4,258	4,231	4,218	4,596	4,669	4,804	5,096	5,099	5,336	5,798	6,321	6,594	91,477
Consumption	580	529	650	655	661	676	637	642	706	737	766	739	781	826	710	860	14,911
Percentage.....	13.86	12.96	15.79	16.78	15.52	15.98	15.10	14.01	15.12	15.33	15.03	14.34	14.42	14.12	11.19	12.13	16.30

TABLE LXXI.

Mortality in the State from Consumption, with the Percentage of the Whole Number of Deaths from all Causes, and the Sex, Parentage and Locality, in the Aggregate of Different Periods, 1865-1889.

YEARS.	Total Deaths from Consumption.	Average Percentage.	SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865-1869.....	2,690	17.29	1,244	1,446	1,575	1,115	116	226	233	909	1,004	202
1870-1874.....	2,808	14.43	1,217	1,591	1,507	1,301	99	216	159	924	1,175	235
1875-1879.....	3,279	15.04	1,436	1,843	1,499	1,780	106	192	195	1,060	1,473	253
1880-1884.....	3,590	14.16	1,597	1,993	1,399	2,191	120	208	229	1,138	1,725	170
1885.....	781	14.45	382	399	315	466	12	45	47	273	348	56
1886.....	826	14.12	382	444	308	518	23	43	57	276	368	59
1887.....	710	11.19	312	398	266	444	20	34	41	246	323	46
1888.....	800	12.13	391	409	284	516	28	55	32	273	362	50
1889.....	727	11.61	356	371	239	488	20	45	37	257	315	53
Total.....	16,211	14.40	7,317	8,894	7,392	8,819	544	1,064	1,030	5,356	7,093	1,124

The proportion of deaths from consumption to the *population* in the different counties and the city of Providence, during the last four years, may be seen in the following summaries :

CONSUMPTION. *Proportion of Deaths to Population.*

For four years, 1885 to 1888, inclusive.

	Persons, One Death to every	In every 1,000 of Population.
Bristol County	614.....or.....	1.63
Kent County.....	515.....or.....	1.94
Newport County.....	692.....or.....	1.45
Providence County Towns†	406.....or.....	2.46
Providence City.....	345.....or.....	2.90
Washington County.....	434.....or.....	2.30
Whole State.....	384.....or.....	2.60

* Providence city not included.

† Including Pawtucket and Woonsocket.

1889.

	Persons, One Death to every		In every 1,000 of Population.
Bristol County.....	590.....	or.....	1.69
Kent County.....	505.....	or.....	1.91
Newport County.....	815.....	or.....	1.22
Providence County Towns	503.....	or.....	1.94
Pawtucket.....	425.....	or.....	2.35
Providence City.	405.....	or.....	2.46
Woonsocket.....	377.....	or.....	2.65
Washington County.	437.....	or.....	2.30
Whole State.....	462.....	or.....	2.16

CROUP.

There were 80 decedents from croup, in 1889.

Sex.—Of the 80 decedents from croup, in 1889, there were 37 males and 43 females, a proportion of 86 males to each 100 females, which is not in accordance with the rule of previous years, in which there has been a preponderance of males.

Parentage.—There were 24 decedents of native parentage, and 56 of foreign parentage. The proportions were in the ratio of 233 of foreign to each 100 of native parentage.

Age.—There were 11 of the decedents under one year of age, 24 of one year and under two, 35 of two years and under five, 9 between five and ten, and 1 above ten years of age.

Season.—

First Quarter.....	32	Third Quarter.....	10
Second Quarter.....	15	Fourth Quarter.....	23
<hr/>			
First half year.....	47	Last half year.....	33
<hr/>			
Total.....	80		

The following Table will exhibit various facts in relation to mortality from croup, for twenty-five years :

TABLE LXII.

Mortality from Croup, with the Percentage of the Whole Number of Deaths, the Sex, Parentage and Localities, for twenty-five years, from 1865 to 1889, inclusive.

YEARS.	CROUP.											
	Number of Deaths.	Percentage.	SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865.	94	.92	44	50	32	62	16	4	2	40	29	3
1866.	53	1.89	26	27	22	31	3	3	3	18	23	3
1867.	50	1.86	25	25	21	29	3	1	7	20	19	.....
1868.	30	1.14	13	17	14	16	.....	2	3	14	11	.....
1869.	41	1.33	19	22	14	27	.....	4	5	10	19	3
1870.	53	1.70	29	24	25	28	.....	3	1	20	27	2
1871.	72	2.33	39	33	31	41	6	8	2	20	35	1
1872.	66	1.70	37	29	17	49	4	2	3	28	27	2
1873.	68	1.62	30	38	35	33	2	7	3	33	22	1
1874.	65	1.59	39	26	38	27	.....	10	1	24	29	1
1875.	96	2.33	53	43	43	53	1	3	4	26	56	6
1876.	102	2.61	50	52	42	60	1	6	.....	26	65	4
1877.	95	2.23	48	47	34	61	4	3	1	47	40	.....
1878.	93	2.20	45	48	43	50	14	3	7	25	39	5
1879.	96	2.28	58	38	40	56	3	6	15	25	43	4
1880.	66	1.45	32	34	27	39	3	3	4	20	30	6
1881.	101	2.16	45	56	38	63	2	6	4	38	49	2
1882.	77	1.60	41	36	32	45	1	2	6	33	32	3
1883.	71	1.40	32	39	33	38	1	6	4	25	35	.....
1884.	80	1.55	40	40	32	48	2	11	4	29	34	.....
1885.	94	1.74	45	49	42	52	4	8	6	46	28	2
1886.	91	1.53	45	45	39	51	2	18	12	24	32	2
1887.	113	1.79	58	55	43	70	9	12	4	43	39	6
1888.	79	1.19	43	36	34	45	4	2	7	34	27	5
1889.	80	1.28	37	43	24	56	3	15	1	27	33	1
Total, 25 years..	1,925	1.80	973	952	795	1,130	88	148	109	695	823	62

* Excepting Providence city.

DIARRHŒA AND DYSENTERY.

There were 159 decedents from diarrhœa and dysentery, in 1889.

Sex.—Of the 159, 73 were males, and 86 were females, or in the ratio of about 85 males to each 100 females.

Parentage.—There were, of the 159 decedents, 67 of native parentage, and 92 of foreign parentage, or a proportion of about 137 of foreign parentage to every 100 of native.

Age.—There were 86 of the decedents from diarrhœa and dysentery under 5 years of age, and there were 24 over 70 years of age leaving 49 for all the 65 years between 5 and 70.

Locality.—Of the 159 decedents, 121 were in Providence county. Twelve deaths were reported from Kent county, and 8 from Washington county, and one death from diarrhœa from Bristol county.

Season.—There were 118 of the deaths from diarrhœa and dysentery that occurred during the months of July, August and September.

The following Table will show the deaths from diarrhœa and dysentery, with the percentage, sex, parentage, etc., for each of twenty-five years, beginning with 1865 :

TABLE LXXIII.

Mortality in the State from Diarrhœa and Dysentery, from 1865 to 1889, inclusive.

YEARS.	Total Deaths.	Per cent.	SEX.		PARENTAGE.		STATE DIVISIONS.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865.	284	8.20	136	128	133	131	9	24	26	87	96	22
1866.	197	6.63	104	93	95	102	7	11	15	67	72	25
1867.	157	5.43	79	76	80	77	8	9	28	49	58	5
1868.	97	3.33	46	51	42	55	2	7	20	26	39	3
1869.	124	3.67	64	60	60	64	9	12	14	35	47	7
1870.	102	3.15	60	42	46	56	...	7	12	38	38	7
1871.	88	2.63	48	40	43	45	3	3	5	34	40	3
1872.	183	4.31	112	71	81	102	5	17	11	63	87	.....
1873.	100	2.27	47	53	70	30	8	13	3	30	44	2
1874.	103	2.44	50	53	51	52	2	7	3	22	67	2
1875.	106	2.46	60	46	60	46	9	6	1	34	51	5
1876.	122	2.96	66	56	52	70	3	6	2	41	65	5
1877.	142	3.19	64	78	73	69	8	6	9	54	55	10
1878.	93	2.09	42	51	51	42	5	8	2	34	39	5
1879.	97	2.17	48	49	47	50	9	6	10	27	42	3
1880.	98	2.03	49	49	50	48	4	6	10	32	42	4
1881.	119	2.37	56	63	54	65	2	4	3	47	57	6
1882.	158	3.11	75	83	69	89	2	4	28	57	64	3
1883.	182	3.45	86	96	88	94	7	7	16	74	75	3
1884.	153	2.98	74	79	69	84	10	5	11	66	56	5
1885.	120	2.33	61	59	51	69	7	6	6	62	35	4
1886.	159	2.72	64	95	70	89	7	11	1	73	59	8
1887.	199	3.11	107	92	70	129	6	16	4	92	72	9
1888.	157	2.31	69	88	97	60	6	8	3	54	71	15
1889.	159	2.54	73	86	67	92	1	12	17	71	50	8
Total, 25 years..	3,479	3.14	1,740	1,739	1,669	1,810	139	221	260	1,269	1,421	169

* Providence city not included.

TABLE LXXIV.

Summary of Mortality from Diarrhœa and Dysentery, 1865-1889, inclusive, in Quinquennial Periods, showing Number, Ratio, Sex, Parentage and Location.

	Total Deaths.	Per cent.	SEX.		PARENTAGE.		STATE DIVISIONS.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.	Providence City.	Washington County.
Five-year period, 1865-1869.....	839	5.45	429	410	410	429	35	63	103	264	312	62
Five-year period, 1870-1874.....	576	2.91	317	259	291	285	18	47	34	187	276	14
Five-year period, 1875-1879.....	560	2.57	280	280	283	277	34	32	24	190	252	28
Five-year period, 1880-1884.....	710	2.80	340	370	330	380	25	26	68	276	294	21
Five-year period, 1885-1889.....	794	2.58	374	420	355	439	27	53	31	352	287	44

DIPHTHERIA.

The number of deaths from diphtheria, in 1889, was 184, which was 7 less than in 1888.

Sex.—Of the 184 decedents, 80 were males, and 104 were females, or a proportion of 77 males to each 100 females.

Parentage.—There were 89 of native, and 95 of foreign parentage, a proportion of about 48 of native and 52 of foreign in each 100 decedents.

Season.—There were 55 deaths from diphtheria in the first quarter, 40 in the second quarter, 38 in the third quarter, and 51 in the fourth quarter.

Age.—There were 109 deaths under five years of age, 53 between five and ten, and 22 between ten and fifty.

Locality.—Of the 184 decedents, 153 were in Providence county; 10 in Kent county; 3 in Bristol county; 11 in Newport county; and 7 in Washington county.

The following Table shows the mortality in the State from diphtheria, for each of twenty-five years, beginning with 1865, also the percentage of deaths, the sex, parentage, etc.:

TABLE LXXV.

Mortality in the State from Diphtheria—1865–1889.

YEARS	Whole Number of Deaths.	DIPHThERIA.											
		Number of Deaths.	Percentage.	SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
				Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865 ...	3,405	82	2.54	41	41	62	20	8	11	6	19	16	22
1866....	2,970	64	2.29	26	38	36	28	1	8	17	16	11	11
1867....	2,889	31	1.15	14	17	19	12	4	4	5	9	5	4
1868....	2,912	20	.76	8	12	11	9	.....	2	3	8	5	2
1869 ...	3,382	33	1.07	18	15	19	14	.....	5	2	3	13	10
1870....	3,238	33	1.06	17	16	18	15	.....	9	3	4	10	7
1871....	3,344	57	1.84	23	34	29	28	1	14	.....	12	21	9
1872 ...	4,247	48	1.24	24	24	35	13	.....	4	6	7	27	4
1873....	4,403	45	1.08	24	21	35	10	.....	2	7	12	23	1
1874....	4,229	59	1.45	30	29	37	22	2	11	4	15	20	7
1875....	4,317	33	.80	17	16	18	15	1	4	3	8	14	3
1876....	4,116	159	4.07	77	82	69	90	1	2	9	29	111	7
1877....	4,450	492	11.56	239	253	233	259	12	44	2	122	295	17
1878....	4,441	435	10.28	224	211	201	234	21	29	23	106	245	11
1879....	4,472	259	6.14	121	138	143	116	7	19	20	95	106	12
1880....	4,829	152	3.40	73	79	75	77	3	6	2	63	61	17
1881....	5,016	216	4.63	106	110	118	98	10	16	8	53	116	13
1882....	5,074	101	2.10	48	53	55	46	.....	3	4	29	48	17
1883....	5,282	95	1.88	39	56	45	50	1	7	3	26	54	4
1884 ...	5,141	119	2.31	65	54	47	72	8	1	9	39	58	4
1885....	5,389	99	1.83	47	52	48	51	5	5	6	39	37	7
1886....	5,849	228	3.90	98	130	101	127	20	21	23	64	98	2
1887....	6,340	287	4.53	135	152	101	186	15	11	4	114	108	35
1888....	6,594	191	2.86	87	104	79	112	13	3	9	58	98	10
1889....	6,259	184	2.93	80	104	89	95	3	10	11	56	97	7
Total, 25 yrs.	112,588	3,522	3.13	1,681	1,841	1,723	1,799	136	251	189	1,006	1,697	243

* Not including Providence city.

FEVER, MALARIAL.

The number of deaths, during 1889, from diseases classed as fever malarial, was 40. The number in 1888 was 71; in 1887, 85; in 1886, 43; in 1885, 30; in 1884, 25; in 1883, 12.

Sex.—Of the 40 decedents from malarial fevers, in 1889, 14 were males and 26 were females, or 58.5 males to every 100 females.

Parentage.—There were, of the 40 decedents from malarial diseases, 8 of native parentage, and 32 of foreign, or 400 of foreign parentage to every 100 of native.

Season.—The deaths from malarial diseases occurred in the different seasons of the year as follows:

First Quarter.....	5	Third Quarter.....	20
Second Quarter.....	9	Fourth Quarter.....	6
—			
First half of year.	14	Last half of year.....	26
Whole Year... ..			
40			

Age.—The number of decedents in the different periods was as follows:

Under 5 years of age.	4
From 5 to 20 years of age.....	7
From 20 to 40 years of age....	9
From 40 to 60 years of age.....	12
60 and over.....	8
—	
40	

Localities.—Bristol county, 1; Kent county, 2; Newport county, 1; Providence county, 36; Washington county, none.

FEVERS, TYPHOID, ETC.

The number of decedents, whose deaths were returned as having been caused by “fever” of some form, not malarial nor cerebro-spinal, was 143. Deaths from puerperal fever are not included.

The term “fever” includes the following types of febrile diseases, as may be seen in Table VII, on page 20: “fevers unspecified,” 8; “continued,” 1; “typhoid,” 134.

The following Table exhibits, for each of the last twenty-five years, the number and the percentage, and the sex and parentage of the decedents from such fevers, and the number in each division of the State:

TABLE LXXVI.

Mortality from Fevers, Non-Malarial.

YEARS.	TYPHOID FEVER, ETC.											
	Number of Deaths.	Percentage.	SEX.		PARENTAGE.		STATE DIVISIONS.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865.....	229	6.4	114	115	149	80	8	17	22	82	79	21
1866.....	150	6.0	73	77	82	68	7	5	32	54	45	7
1867.....	119	4.1	60	59	84	35	9	10	17	47	31	5
1868.....	84	2.9	45	39	57	27	4	5	7	30	23	15
1869.....	101	3.0	53	48	79	22	7	7	1	37	33	16
1870.....	153	4.7	66	87	80	73	5	11	14	57	49	17
1871.....	125	3.7	60	65	69	56	2	8	10	41	51	13
1872.....	179	4.2	87	92	91	86	4	12	6	75	65	17
1873.....	172	3.9	73	99	113	59	4	9	9	61	56	33
1874.....	117	2.8	57	60	56	61	1	10	3	37	58	8
1875.....	147	3.4	73	74	90	57	1	4	6	49	69	18
1876.....	126	3.0	65	61	71	55	5	9	13	44	33	22
1877.....	134	3.0	63	71	65	69	8	10	8	52	44	12
1878.....	150	3.4	68	82	77	73	13	13	6	59	47	7
1879.....	114	2.7	47	67	63	51	4	13	6	44	40	15
1880.....	158	3.4	74	84	94	64	8	12	5	66	52	13
1881.....	143	2.8	74	69	74	69	4	13	14	58	41	6
1882.....	229	4.7	111	118	100	129	6	11	5	56	145	7
1883.....	258	4.8	146	112	117	141	9	16	10	82	134	9
1884.....	165	3.2	83	82	78	87	7	7	12	66	64	8
1885.....	158	2.9	71	87	70	88	6	14	8	69	53	8
1886.....	169	2.9	78	91	76	93	6	8	11	66	70	15
1887.....	127	2.0	67	60	58	69	2	14	9	49	38	.....
1888.....	235	3.6	125	110	88	147	20	24	14	66	102	9
1889.....	143	2.3	85	58	56	87	2	17	9	46	60	9
Total, 25 years..	3,885	3.4	1,918	1,967	2,037	1,848	152	179	257	1,393	1,482	322

* Providence city not included.

During the period of twenty-five years, 1865 to 1889, inclusive, the proportions of the sexes of the decedents from "fever," in the State, were 102 females to every 100 males.

Parentage.—There were 56 decedents from fever, of native parentage, in 1889, and 87 of foreign parentage, a proportion of about 60 of foreign and 40 of native in every 100 decedents.

The following Table shows the number of decedents from fevers, in each division of ages, in each of the last twenty-five years, in the State of Rhode Island :

TABLE LXXVII.

TYPHOID FEVER.		PERIODS OF LIFE.										
YEARS.		Under 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 & over.	Not stated.
1865.....	35	18	46	54	30	14	18	7	5	2	....
1866.....	23	10	21	26	21	16	9	14	10	....	....
1867.....	17	6	24	33	12	11	8	4	2	2	1	
1868.....	10	7	10	21	8	8	10	4	5	....	....
1869.....	10	8	14	28	9	7	9	8	6	2	....
1870.....	15	13	28	39	16	20	7	7	6	1	....
1871.....	13	10	20	28	18	16	9	4	5	2	....
1872.....	17	18	34	54	20	9	12	11	3	1	....
1873.....	27	12	34	31	25	13	13	7	8	2	....
1874.....	10	14	26	32	9	5	10	3	6	2	....
1875.....	23	14	19	43	18	10	10	6	4	....	....
1876.....	21	10	15	24	14	9	6	16	6	3	2	
1877.....	22	13	13	36	20	8	5	7	2	2	1	
1878.....	17	16	27	17	13	11	12	2	3	2	....
1879.....	19	7	14	26	15	6	3	12	8	3	1	
1880.....	25	12	24	43	23	12	10	5	3	....	1	
1881.....	25	9	19	27	14	11	9	12	11	4	....
1882.....	24	22	44	60	27	14	9	10	9	1	....
1883.....	36	25	46	75	31	12	11	10	8	2	2	
1884.....	24	13	19	47	22	9	12	10	5	3	1	
1885.....	35	12	16	25	36	11	11	12	6	4	....
1886.....	29	9	25	41	20	14	17	8	5	1	....
1887.....	24	8	16	31	16	10	5	8	4	4	1	
1888.....	27	27	42	75	29	16	12	3	4	....	....
1889.....	18	12	29	41	18	8	9	5	3	....	....
Totals.....	514	325	624	1006	471	280	216	195	137	43	10	

TABLE LXXVII.

Comparative Exhibit of the Percentage of Deaths from Typhoid Fever, to Total Deaths from Specified Causes, in four New England States, for fourteen years, 1876-1889.

	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889
Rhode Island'	3.0	3.0	3.4	2.7	3.4	2.8	4.7	4.8	3.2	2.9	2.9	2.0	3.6	2.2
Massachusetts.....	2.7	2.7	2.3	1.9	2.5	2.9	2.9	2.3	2.4	2.0	2.1	2.3	2.2	2.2
Connecticut	3.6	3.3	2.7	1.8	2.5	2.5	3.1	2.1	2.5	1.1	2.2	1.2	2.2	....
Vermont.....	4.2	4.8	3.4	2.7	3.5	5.5	3.4	3.1	....	....	2.5	2.5	....	....

DISEASES OF THE HEART.

The number of decedents from the various forms of diseases of the heart, as reported in 1889, was 460. The number is larger by 24 than that of 1888.

Sex.—There were 233 male decedents, and 227 female decedents; a proportion of about 102 males to every 100 females.

Parentage.—Of the 460 decedents from diseases of the heart, in 1889, there were 258 of native parentage, and 202 of foreign, a proportion of 127 of native parentage to every 100 of foreign. It is in accordance with the invariable rule of the whole period of registration, that the native population is more subject to heart diseases than the foreign.

There was not only a larger number of deaths from this cause, in 1889, than in any previous year, but also a larger ratio to whole number of deaths.

The following Table exhibits for each of the last twenty-five years, 1865 to 1889, inclusive, the number and percentage, and the sex and parentage of the decedents from diseases of the heart, and the number of the same in each division of the State:

TABLE LXXVIII.

Mortality from Diseases of the Heart.

YEARS.	Total Number.	Per cent.	SEX.		PARENTAGE.		STATE DIVISIONS.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865.....	98	2.88	51	47	65	33	6	5	8	27	47	5
1866.....	115	3.87	58	57	90	25	7	8	10	41	40	9
1867.....	114	3.94	67	47	81	33	4	9	7	37	49	8
1868.....	116	3.96	58	58	89	37	5	8	12	35	52	4
1869.....	128	3.78	75	53	79	49	2	13	11	36	62	4
1870.....	117	3.61	77	40	77	40	4	10	8	35	59	1
1871.....	144	4.30	78	66	91	53	4	7	8	42	77	6
1872.....	189	4.45	104	85	119	70	5	9	10	59	83	13
1873.....	189	4.29	83	106	122	67	4	11	14	48	101	11
1874.....	214	5.06	109	105	150	64	6	6	28	50	106	18
1875.....	186	4.31	84	102	113	73	2	13	22	49	88	12
1876.....	166	4.03	81	80	109	57	9	11	10	38	86	12
1877.....	182	4.09	94	88	110	72	3	7	9	57	93	13
1878.....	166	3.73	88	78	109	57	5	11	15	38	83	14
1879.....	202	4.78	114	88	127	75	8	20	16	38	111	9
1880.....	231	5.03	125	106	146	85	9	21	29	59	104	9
1881.....	264	5.65	131	133	154	110	9	21	24	73	121	16
1882.....	255	5.31	116	139	162	93	8	16	23	55	142	11
1883.....	325	6.20	167	158	179	146	8	27	30	70	172	18
1884.....	285	5.60	135	150	163	122	6	16	25	87	139	12
1885.....	349	6.48	162	187	198	151	13	27	25	94	159	31
1886.....	330	5.20	152	178	184	146	12	20	18	82	168	30
1887.....	406	6.40	205	201	240	166	7	21	36	123	193	26
1888.....	436	6.56	196	240	240	196	11	22	40	122	210	31
1889.....	460	7.35	233	227	258	202	19	31	39	143	199	29
Total, 25 years..	5,667	4.90	2,848	2,819	3,425	2,242	176	370	477	1,538	2,754	352

Sex.—Of the 5,667 persons deceased from diseases of the heart, in the last twenty-five years, 2,848 were males, and 2,819 were females; or 101 males to each 100 females.

Parentage.—Of the 5,667 decedents, during twenty-five years, 3,425 were of native parentage, and 2,242 of foreign. The proportions would,

* Not including Providence city.

therefore, stand as follows: To every 100 of foreign parentage there were about 153 of native; or about 60 native and 40 of foreign parentage in every 100 deaths.

The following Table shows the number of decedents from diseases of the heart, in each divisional period of life, in each of the last twenty-five years:

TABLE LXXIX.

Mortality from Diseases of the Heart, in Age Periods.

YEARS.	Under 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 and over.	Not stated.
1865.....	14	4	6	7	22	17	19	9	.....
1866.....	18	8	14	17	10	23	21	4	.....
1867.....	11	11	10	13	22	16	27	4	.....
1868.....	15	5	13	11	14	28	25	5	.....
1869.....	21	4	14	18	20	22	21	7	1
1870.....	19	6	11	13	20	21	23	3	1
1871.....	9	12	10	19	23	36	28	6	1
1872.....	27	12	22	19	31	36	29	13	.....
1873.....	19	11	28	18	25	35	42	9	2
1874.....	20	16	26	21	27	50	40	12	2
1875.....	14	16	25	20	32	29	41	9	.....
1876.....	14	10	15	19	20	38	39	10	1
1877.....	15	11	20	18	27	45	33	13	.....
1878.....	16	8	18	16	26	36	35	11	.....
1879.....	19	9	13	25	33	51	36	16	.....
1880.....	15	10	18	23	38	49	49	28	1
1881.....	32	13	26	23	37	49	53	21	.....
1882.....	22	17	24	25	36	51	61	17	2
1883.....	39	13	21	33	52	65	76	26	.....
1884.....	15	25	21	32	45	61	50	32	4
1885.....	38	13	24	42	61	69	78	24	.....
1886.....	39	18	28	38	52	68	69	18	.....
1887.....	52	30	23	35	61	79	87	39	.....
1888.....	39	25	30	54	84	97	74	33	.....
1889.....	45	25	37	45	69	85	118	35	1
Total, 25 years.....	587	332	397	614	887	1,156	1,174	404	16

The results of twenty-five years of registration, with record of ages of decedents from diseases of the heart, show in periods of twenty years each of life, the following percentages :

Under 20 years of age.....	10.3 per cent.
Between 20 and 40.....	12.9 per cent.
Between 40 and 60.....	26.5 per cent.
Between 60 and 80.....	41.1 per cent.
Over 80.....	9.2 per cent.
	<hr/>
	100.0 per cent.

It will be seen that more than 41 per cent. of all the deaths from diseases of the heart were of persons over sixty years of age, and under eighty.

Diseases of the heart have acquired large importance as a cause of death. From 28.8 in every 1,000 deaths from all causes, in 1865, heart diseases have gradually increased to about 73 in every 1000, in 1889.

INSANITY.

There were 22 deaths from insanity, in 1889, a decrease of 21 from 1888. The percentage to the whole number of deaths was less than four-tenths of one per cent. These deaths occurred chiefly at the Cranston institutions, and in the Butler hospital.

Sex.—There were 14 male and 8 female decedents.

Parentage.—The number of native decedents from insanity was 12, and of foreign parentage 10.

The following Table shows the mortality in the State from insanity, for each of twenty-five years, with sex, parentage, etc., from 1865 to 1889, inclusive :

TABLE LXXX.

Mortality in the State from Insanity.

YEARS.	Number of Deaths, from Insanity.	Percentage.	SEX.		PARENTAGE.		STATE DIVISIONS.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865-1869.....	74	.49	36	38	55	19	.....	8	3	7	54	2
1870.....	18	.55	6	12	13	5	.....	.....	1	2	15	.....
1871.....	16	.45	11	5	13	3	.....	.....	1	4	11	.....
1872.....	26	.61	11	15	16	10	3	.....	1	12	10	.....
1873.....	19	.45	8	11	11	8	.....	.....	2	5	12	.....
1874.....	13	.32	7	6	11	2	.....	1	.....	3	9	.....
1870-1874.....	92	.48	43	49	64	28	3	1	5	26	57	.....
1875.....	32	.78	18	14	25	7	.....	1	4	9	16	2
1876.....	12	.28	5	7	9	3	1	2	1	1	6	1
1877.....	19	.49	9	10	9	10	.....	1	.....	5	12	1
1878.....	22	.50	5	17	16	6	.....	.....	1	3	17	1
1879.....	17	.40	11	6	10	7	.....	.....	.....	5	11	1
1875-1879.....	102	.49	48	54	69	33	1	4	6	23	62	6
1880.....	19	.39	9	10	13	6	.....	1	2	6	9	1
1881.....	32	.63	15	17	22	10	1	1	3	10	16	1
1882.....	23	.45	9	14	18	5	.....	1	.....	8	12	2
1883.....	29	.55	12	17	17	12	1	2	.....	7	18	1
1884.....	36	.69	17	19	24	12	2	3	.....	21	9	1
1880-1884.....	139	.54	62	77	94	45	4	8	5	52	64	6
1885.....	35	.67	16	19	18	17	.....	.....	2	23	10	.....
1886.....	49	.83	21	28	28	21	3	1	1	37	7	.....
1887.....	64	1.01	35	29	33	31	1	.....	1	56	.....	6
1888.....	43	.64	21	22	24	19	1	2	.....	33	7	.....
1889.....	22	.35	14	8	12	10	.....	.....	.....	14	8	.....
1885-1889.....	193	.70	107	106	115	98	5	3	4	163	32	6
Total, 25 years..	600	.54	296	324	397	223	13	24	23	271	269	20

* Providence city not included.

DISEASES OF THE KIDNEYS.

There were 210 deaths returned, during 1889, with diseases of the kidneys assigned as the cause.

Sex.—Of the 210, there were 119 males and 91 females, or 130 males to every 100 females, which is about the average proportion during a period of twenty-five years.

Parentage.—There were 122 of native parentage, and 88 of foreign, or about 140 of native to every 100 of foreign parentage.

Age.—Of the 210 decedents from kidney diseases, 7 were under five years of age, 7 from five to twenty, 37 from twenty to forty, 71 from forty to sixty, 74 from sixty to eighty, and 14 eighty and over.

Diseases of the kidneys have largely increased in number, and much larger still in proportion, during the last twenty-five years.

During the ten years from 1865 to 1874, inclusive, the proportion of deaths from kidney diseases, to whole number of deaths from all causes, was but little more than one per cent., while during the ten years from 1880 to 1889, inclusive, the proportion was nearly two and one-half per cent.

The following Table will present various facts in relation to the mortality from diseases of the kidneys, in Rhode Island, for twenty-five years, 1865–1889:

TABLE LXXXI.

Mortality in the State from Kidney Diseases, with the Percentage of the Whole Number of Deaths, Sex, Parentage and Locality for twenty-five years, from 1865 to 1889, inclusive.

YEARS.	Number of Deaths from Kidney Diseases.	Percentage.	SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865-1869.....	117	.76	83	34	80	37	6	4	19	23	57	8
1870.....	31	.96	23	8	21	10	1	3	6	5	14	2
1871.....	43	1.39	27	16	31	12	2	3	3	10	21	4
1872.....	55	1.42	30	25	29	26	4	2	2	11	34	2
1873.....	66	1.57	38	28	40	26	.....	3	5	19	31	8
1874.....	66	1.62	36	30	41	25	4	3	3	11	44	1
1870-1874.....	261	1.34	154	107	162	99	11	14	19	56	144	17
1875.....	65	1.58	36	29	46	19	1	.....	4	16	42	2
1876.....	50	1.28	22	28	32	18	1	1	7	10	28	3
1877.....	67	1.57	40	27	35	32	2	1	.....	14	49	1
1878.....	80	1.89	50	30	49	31	4	3	3	21	47	2
1879.....	79	1.88	51	28	44	35	1	3	1	23	43	8
1875-1879.....	341	1.56	199	142	206	135	9	8	15	84	209	16
1880.....	91	2.02	52	39	51	40	1	5	10	27	46	2
1881.....	79	1.69	40	39	47	32	7	5	4	14	48	1
1882.....	86	1.79	50	36	45	41	2	5	10	15	52	2
1883.....	129	2.43	72	57	74	55	5	2	17	37	60	8
1884.....	118	2.29	53	65	66	52	5	11	12	28	54	8
1880-1884.....	503	1.98	267	236	283	220	20	28	53	121	260	21
1885.....	159	2.97	92	67	86	73	8	10	17	31	88	5
1886.....	155	2.49	85	70	93	62	3	10	22	37	71	13
1887.....	169	2.66	92	77	90	79	5	6	16	43	92	7
1888.....	213	3.23	102	111	122	91	10	10	24	46	115	8
1889.....	210	3.38	119	91	122	88	14	13	15	62	96	10
1885-1889.....	906	2.94	490	416	513	393	40	49	94	218	462	42
Total, 25 years..	2,128	1.72	1,193	935	1,244	884	86	103	200	503	1,132	104

* Providence city not included.

TABLE LXXXIII.

Percentage to Whole Number of Deaths, Sex, Parentage and Locality of Decedents from Diseases of the Liver, 1865-1889.

YEARS.	Number of Deaths.	Per cent.	SEX.		PARENTAGE.		STATE DIVISIONS.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865-1869.....	183	1.19	103	80	122	61	14	11	33	42	67	16
1870.....	45	1.23	17	28	29	16	.....	4	7	15	12	7
1871.....	35	1.13	18	17	19	16	4	4	2	6	15	4
1872.....	35	.82	18	17	17	18	2	3	3	11	15	1
1873.....	45	1.02	20	25	26	19	4	2	1	18	16	4
1874.....	40	.95	21	19	26	14	3	3	3	11	16	4
1870-1874.....	200	1.03	94	106	117	83	13	16	16	61	74	20
1875.....	47	1.09	26	21	19	28	5	2	3	10	26	1
1876.....	45	1.09	26	19	27	18	1	5	5	11	18	5
1877.....	52	1.17	23	29	31	21	1	.....	7	16	24	4
1878.....	49	1.10	25	24	32	17	8	1	6	14	18	2
1879.....	52	1.24	27	25	31	21	4	4	2	14	22	6
1875-1879.....	245	1.14	127	118	140	105	19	12	23	65	108	18
1880.....	58	1.27	29	29	40	18	4	3	8	15	25	3
1881.....	46	.92	30	16	21	25	2	2	6	8	24	4
1882.....	62	1.22	34	28	36	26	3	5	10	17	24	3
1883.....	51	.94	27	24	20	31	5	6	4	16	18	2
1884.....	48	.93	22	26	23	25	5	3	5	2	31	2
1880-1884.....	265	1.06	142	123	140	125	19	19	33	58	122	14
1885.....	61	1.13	24	37	32	29	2	6	6	21	24	2
1886.....	54	.92	29	25	26	28	4	4	4	14	28	.....
1887.....	86	1.35	40	46	38	48	3	5	3	31	39	5
1888.....	68	1.03	38	30	36	32	1	5	6	28	26	2
1889.....	70	1.12	30	40	31	39	1	2	10	26	29	2
1885-1889.....	339	1.11	161	178	163	176	11	22	29	120	146	11
Total, 25 years..	1,230	1.10	627	605	682	550	76	80	134	346	517	79

* Providence city not included.

DROPSY.

To ascribe death to dropsy is to use a very indefinite term for a cause. It is true that the functional derangement, or the organic disease or diseases that cause or are contributory to an accumulation of serum as a result, are occasionally obscure, and require not a little care and acumen to detect. It will be seen, by the following Table, that the means that may be employed, and the skill of the physician, in diagnosis, have been so far increased, during the last fifteen years, as to greatly lessen the number and proportion of the returns giving dropsy as a cause of death.

From a proportion of more than two per cent. of the total causes of death, during the first fifteen years, as shown in the Table, the ratio has fallen to less than eight-tenths of one per cent., during the last fifteen years.

The total deaths ascribed to dropsy as a cause, during thirty-seven years, are 1,934, of which 866 were males and 1,068 were females, a proportion of about 125 females to every 100 males.

There were 42 deaths returned as having been caused by dropsy, in 1889, which, with two or three exceptions, is the smallest number ever reported.

TABLE LXXXIV.

Mortality from Kidney and Liver Diseases compared with Dropsy (so returned), for thirty-seven years—1853 to 1889.

YEARS.	DEATHS FROM KIDNEY DISEASES			DEATHS FROM LIVER DISEASES			TOTAL DEATHS FROM KIDNEY AND LIVER DISEASES.			DEATHS FROM DROPSY.			Excess or Diminution of Dropsy in refer- ence to Kidney and Liver Diseases.	Per cent. of Deaths from Dropsy to all.
	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.		
1853-1857.	26	20	6	51	28	23	77	48	29	208	89	119	+131	2.21
1858-1862.	71	38	33	168	87	81	239	125	114	270	113	157	+31	2.07
1863-1867.	99	69	30	191	104	87	290	173	117	371	169	202	+81	2.10
1868-1872.	185	119	66	183	92	91	368	211	157	274	126	148	-94	1.62
1873.....	66	38	28	45	20	25	111	58	53	60	32	28	-51	1.36
1874.....	66	36	30	40	21	19	106	57	49	39	18	21	-67	.92
1875.....	65	36	29	47	26	21	112	62	50	56	18	38	-56	1.29
1876.....	50	22	28	45	26	19	95	48	47	66	32	34	-29	1.61
1877.....	67	40	27	52	23	29	119	63	56	63	25	38	-56	1.42
1873-1877	314	172	142	229	116	113	543	288	255	284	125	159	-259	1.32
1878.....	81	51	30	49	25	24	130	76	54	38	21	17	-92	.86
1879.....	81	52	29	52	27	25	133	79	54	50	26	24	-83	1.12
1880.....	91	52	39	58	29	29	149	81	68	37	15	22	-112	.77
1881.....	79	40	39	46	30	16	125	70	55	47	23	24	-78	.94
1882.....	88	47	41	62	34	28	150	81	69	50	22	28	-100	.99
1878-1882.	420	242	178	267	145	122	687	387	300	222	107	115	-465	.94
1883.....	117	67	50	51	27	24	168	94	74	47	21	26	-121	.89
1884.....	133	58	75	52	24	28	185	82	103	40	20	20	-145	.78
1885.....	168	95	73	61	24	37	229	119	110	44	30	14	-185	.82
1886.....	163	91	72	71	38	33	234	129	105	49	20	29	-185	.84
1887.....	169	92	77	86	40	46	255	132	123	35	14	21	-220	.55
1883-1887.	750	403	347	321	153	168	1,071	556	515	215	105	110	-856	.78
1888.....	213	102	111	68	38	30	281	140	141	48	18	30	-233	.73
1889.....	210	119	91	70	30	40	280	149	131	42	14	28	-238	.70
Totals....	2,288	1,284	1,604	1,548	793	755	3,836	2,077	1,759	1,934	866	1,068	-1,902	1.55

TABLE LXXXV.

Mortality in the State from Old Age, with the Percentage of the Whole Number of Deaths, Sex, Parentage and Locality, for twenty-five years, from 1865 to 1889, inclusive.

YEARS.	Number of Deaths, from Old Age.	Percentage.	SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865-1869.....	946	6.53	349	597	728	218	49	91	157	262	269	118
1870.....	204	6.58	77	127	155	49	10	24	24	59	51	36
1871.....	232	7.44	94	138	173	59	14	24	34	56	70	34
1872.....	253	6.02	93	140	173	60	10	14	26	75	69	39
1873.....	254	6.07	107	147	177	77	14	22	39	71	79	29
1874.....	223	5.46	80	143	160	63	14	20	29	61	71	28
1870-1874.....	1,146	6.32	451	695	838	308	62	104	152	322	340	166
1875.....	216	5.25	93	123	150	66	9	23	33	69	59	23
1876.....	241	6.18	107	134	177	64	12	14	38	65	71	41
1877.....	213	5.00	96	117	145	68	12	23	29	57	63	29
1878.....	222	5.25	84	138	172	50	15	8	32	76	61	30
1879.....	220	5.22	82	138	152	68	14	19	26	69	67	25
1875-1879.....	1,112	5.38	462	650	796	316	62	87	158	336	321	148
1880.....	273	5.95	121	152	186	87	12	20	34	90	73	44
1881.....	247	5.29	101	146	167	80	12	24	36	93	72	10
1882.....	283	5.89	110	173	190	93	20	25	40	106	79	13
1883.....	275	5.22	105	170	184	91	17	18	44	91	84	21
1884.....	293	5.68	101	192	196	97	16	20	39	106	86	26
1880-1884.....	1,371	5.60	538	833	923	448	77	107	193	486	394	114
1885.....	267	4.95	86	181	183	84	9	32	47	87	70	22
1886.....	276	4.69	101	175	181	95	16	24	36	100	73	27
1887.....	278	4.38	103	175	167	111	17	19	29	109	76	28
1888.....	290	4.35	108	182	198	92	16	26	25	124	64	35
1889.....	227	3.63	75	152	136	91	10	23	23	73	71	27
1885-1889.....	1,338	4.40	473	865	865	473	68	124	160	493	354	139
Total, 25 years..	5,913	5.64	2,273	3,640	4,150	1,763	318	513	820	1,899	1,678	685

* Providence city not included.

PERITONITIS.

There were 63 deaths which were caused by peritonitis, during 1889.

Sex.—Of the 63 decedents from peritonitis there were 22 males and 41 females, a proportion of nearly 2 females to every male.

Parentage.—There were 26 of native parentage and 37 of foreign, or a ratio of 142 foreign to every 100 of native parentage.

Season.—One-third of the mortality occurred during the first quarter of the year, otherwise the seasons did not have a notable difference.

PNEUMONIA.

There were 483 decedents from pneumonia, in 1889. The number is 25 less than in 1888.

The proportion to whole number of deaths was 7.7 per hundred, the same as in 1887 and 1888. In 1885 it was 8.6 in every 100; and in 1886 8.2 in every 100.

Sex.—Of the 483 decedents from pneumonia, and including congestion of the lungs, 255 were males and 228 were females; or about 111 males to each 100 females.

Parentage.—By parentage there were 213 of native and 270 of foreign parentage. The proportion of decedents from pneumonia was about 84 of native to each 100 of foreign parentage.

Season.—There were 285, or nearly 60 per cent., of the deaths that occurred during the first four months of the year. The largest mortality by months was 92 in March, and 69 each in February and April.

Pneumonia, as a cause of death, has increased in the ratio to whole number of deaths, during the last twenty-five years, from an average of 5.8 per cent., during the first ten years, to an average of 7.6 per cent. during the last ten.

The following Table shows, for each of the last twenty-five years, the number and the percentage, with the sex and the parentage of the decedents from pneumonia; and the number in each year, in each division of the State:

TABLE LXXXVI.

YEARS.	PNEUMONIA.											
	Whole Number.	Per cent.	SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865.	175	5.1	80	95	110	65	8	11	21	49	74	12
1866.	193	6.5	94	99	127	66	13	17	13	59	81	10
1867.	172	5.9	68	104	103	69	8	12	12	56	68	16
1868.	191	6.6	99	92	120	71	9	5	16	54	92	15
1869.	190	5.6	104	86	110	80	7	10	10	63	88	12
1870.	182	5.6	102	80	96	86	6	12	15	55	78	16
1871.	218	6.5	104	114	129	89	12	21	11	68	85	21
1872.	229	5.4	119	110	125	104	11	1	9	74	120	14
1873.	234	5.3	127	107	143	91	11	9	10	65	123	16
1874.	250	5.9	118	132	143	107	6	13	7	73	136	15
1875.	400	9.3	199	201	243	157	14	27	25	105	198	31
1876.	339	8.2	164	175	162	177	13	23	16	97	163	27
1877.	226	5.1	104	122	127	99	10	7	14	81	98	16
1878.	317	7.1	143	174	176	141	10	11	18	110	140	28
1879.	311	7.4	148	163	163	148	7	15	15	103	156	15
1880.	364	7.9	180	184	177	187	26	16	18	92	192	20
1881.	327	6.5	177	150	190	137	10	23	17	81	174	22
1882.	344	7.2	178	166	163	181	10	22	24	91	176	21
1883.	400	7.8	192	208	198	202	19	21	34	108	204	14
1884.	363	7.1	167	196	192	171	10	13	17	125	172	26
1885.	465	8.6	214	251	271	194	15	20	33	151	227	19
1886.	481	8.2	232	249	234	247	17	29	37	161	209	28
1887.	488	7.7	260	228	227	261	13	27	39	142	227	40
1888.	508	7.7	274	234	227	281	16	37	29	171	219	36
1889.	483	7.7	255	228	213	270	18	37	29	175	208	22
Total, 25 years..	7,850	6.9	3,902	3,948	4,169	3,681	299	439	489	2,409	3,708	512

* Providence city not included.

TABLE LXXXVII.

Exhibiting the Number of Decedents from Pneumonia, in each of the several Periods of Life, during each of the last twenty-five years, from 1865 to 1889, inclusive.

YEARS.	Under 5.	5 to 10.	10 to 15.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 & over.	Not stated.
1865.....	65	4	2	....	14	11	15	17	21	21	5	....
1866.....	57	4	4	5	12	10	14	21	25	32	9	....
1867.....	57	9	2	3	10	11	13	16	25	13	12	1
1868.....	70	4	3	3	15	8	16	13	19	27	13	....
1869.....	64	11	1	2	11	12	9	23	25	16	11	....
1870.....	84	6	5	4	6	7	8	14	20	19	8	1
1871.....	71	7	2	7	10	17	16	16	35	17	19	1
1872.....	83	5	1	7	17	20	19	22	24	19	11	1
1873.....	105	4	8	3	10	14	16	17	24	23	10	....
1874.....	76	9	4	6	17	17	25	21	40	27	8	....
1875.....	120	9	3	8	22	30	35	39	61	43	28	2
1876.....	116	5	4	3	20	20	32	35	48	39	17	....
1877.....	79	2	....	7	15	15	24	27	22	24	9	2
1878.....	115	9	4	10	14	17	28	20	42	45	13	....
1879.....	102	8	1	3	14	27	26	35	38	38	9	....
1880.....	95	18	3	16	14	33	37	46	47	43	12	....
1881.....	102	4	2	5	15	22	26	45	48	31	26	1
1882.....	71	3	4	14	22	36	49	33	41	46	21	4
1883.....	88	15	2	13	32	33	40	53	49	46	27	2
1884.....	103	14	5	11	23	34	24	32	53	37	23	4
1885.....	121	9	10	8	23	29	50	49	76	59	29	2
1886.....	111	10	7	19	32	35	50	58	74	55	30	....
1887.....	132	15	7	7	32	43	51	56	64	53	28	....
1888.....	103	20	5	15	49	48	61	62	70	54	21	....
1889.....	120	14	3	20	27	36	51	57	77	47	31	....
Totals.....	2,310	218	92	199	480	585	735	832	1,068	874	440	21

Age.—Of the decedents from pneumonia, during the period of twenty-five years, nearly one-third were under five years of age. Of over fifty years of age the number of decedents was about 40 per cent. of the whole number.

The following summary will present the percentages in round numbers :

Under five years of age.....	30 per cent.
Five years and under twenty.....	6 per cent.
Twenty years and under fifty.....	24 per cent.
Fifty years and over.....	40 per cent.

SCARLATINA.

The number of deaths returned as having been caused by scarlatina, in 1889, was 51. The number is 156 less than in 1888, and less than in any year since 1883.

Sex.—Of the 51 decedents from scarlatina 24 were males and 27 were females; or 112 females to every 100 males.

Parentage.—There were 14 of native parentage, and 37 of foreign; a proportion of about 264 of foreign parentage to every 100 of native.

The following Table will present the statistics of scarlatina for the last thirty-five years, from 1855 to 1889, inclusive, the number and percentage and sex of the decedents from scarlatina, and the number from scarlatina in each division of the State. It also shows, from 1865 to 1889, inclusive, the *parentage* of the decedents from scarlatina :

TABLE LXXXVIII.

YEARS.	SCARLATINA.											
	Whole Number.	Per cent.	SEX.		PARENTAGE.		STATE DIVISIONS.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
10 yrs., 1855-1864.	1,256	4.9	611	655	...	...	46	62	189	334	568	57
1865.....	255	7.5	130	125	134	121	33	17	3	86	108	8
1866.....	28	0.9	15	13	12	16	5	.....	8	12	3	.....
1867.....	14	0.5	6	8	10	4	1	.....	1	2	10	.....
1868.....	93	3.2	47	46	32	61	2	3	3	34	50	1
1869.....	286	8.4	126	160	128	158	17	23	12	72	138	34
1870.....	75	2.3	37	38	28	47	1	6	3	22	35	8
1871.....	66	1.9	41	25	31	35	1	3	1	37	21	13
1872.....	54	1.2	22	32	22	31	.....	1	4	27	19	2
1873.....	287	6.5	124	163	163	124	4	2	42	80	132	27
1874.....	462	10.9	231	231	176	196	27	17	1	133	268	16
1875.....	185	4.3	85	100	121	56	8	30	3	35	94	15
1876.....	80	1.9	34	46	42	38	3	2	7	21	35	12
1877.....	62	1.4	26	36	29	33	14	4	3	21	12	8
1878.....	86	1.9	41	45	35	51	3	5	3	14	57	4
1879.....	311	7.4	164	147	130	181	3	6	4	37	255	6
1880.....	468	10.0	215	253	216	252	22	30	11	143	243	19
1881.....	138	3.0	79	59	62	76	11	25	12	41	45	4
1882.....	45	0.9	24	21	16	29	.....	3	16	7	18	1
1883.....	34	0.6	17	17	14	20	1	1	5	9	16	2
1884.....	97	1.8	39	58	41	56	.....	.....	8	28	57	4
1885.....	91	1.7	36	55	48	43	.....	3	6	24	38	20
1886.....	88	1.5	46	42	29	59	.....	13	2	41	30	2
1887.....	266	4.2	120	146	95	171	9	16	4	80	154	3
1888.....	207	3.1	101	106	91	116	1	29	10	87	80	.....
1889.....	51	0.8	24	27	14	37	3	2	6	14	25	1
Total	5,086	4.7	2,432	2,654	1,719	2,109	215	303	361	1,441	2,511	255

* Not including Providence city.

CROUP, DIPHTHERIA AND SCARLATINA.—*Season and Mortality.*

The following Table is continued, to show by comparison the *influence of season* in regard to the mortality from croup and scarlatina for *thirty-five* years, and diphtheria for *thirty* years. The Table will give the average *monthly* and *quarterly* percentages of deaths from each cause:

TABLE LXXXIX.

MONTHS.	CROUP. 1853-1887.		DIPHTHERIA. 1858-1887.		SCARLATINA. 1853-1887.	
	Number of deaths.	Per cent.	Number of deaths.	Per cent.	Number of deaths.	Per cent.
January.....	328	12.66	365	9.68	646	11.85
February.....	268	10.34	260	6.88	579	10.63
March.....	220	8.48	270	7.15	530	9.73
First Quarter.....	816	31.48	895	23.71	1,755	32.21
April.....	184	7.09	226	5.90	441	8.10
May.....	128	4.93	242	6.40	481	8.83
June.....	116	4.47	227	6.00	418	7.69
Second Quarter.....	428	16.49	695	18.30	1,340	24.62
July.....	86	3.32	208	5.48	314	5.76
August.....	72	2.77	245	6.38	261	4.79
September.....	162	6.25	272	7.45	269	4.94
Third Quarter.....	320	12.34	825	19.31	844	15.49
October.....	272	10.49	502	13.29	384	7.04
November.....	376	14.51	505	13.37	493	9.04
December.....	381	14.69	454	12.02	632	11.60
Fourth Quarter.....	1,029	39.69	1,461	38.68	1,509	27.68
Totals.....	2,593	100.00	3,776	100.00	5,448	100.00

SUICIDE.

The number of deaths by suicide, in Rhode Island, during 1889, was 24.

There were 20 male and 4 female decedents from that cause, or a proportion of five males to every one of the females.

Of the 24, nine were of native parentage, and fifteen of foreign. It is not according to the rule of previous years that there was a preponderance of foreign parentage.

The means of self-destruction, according to the returns, were as follows: By corrosive sublimate, 1, female; by drowning, 3, males; by hanging, 6 males and 2 females; by coal-gas, 1, male; by paris-green, 1, male; by shooting, 4, males; by suffocation, 1, male; returned with means unspecified, 4 males and 1 female.

The proportion of suicides, to all other causes of death in Rhode Island, during 25 years has, in but one quinquennial period, exceeded one-half of one per cent.

Deaths by suicide have been more than 25 per cent. less, during the last ten years, than during the first ten of the twenty-five years, as may be seen in the following Table:

TABLE XC.

Mortality in the State from Suicide, with the Percentage of the Whole Number of Deaths, Sex, Parentage and Locality, for twenty-five years, from 1865 to 1889, inclusive.

YEARS.	Number of Deaths, from Suicide.	Percentage.	SEX.		PARENTAGE.		DIVISIONS OF THE STATE.					
			Males.	Females.	Native.	Foreign.	Bristol County.	Kent County.	Newport County.	Providence County.*	Providence City.	Washington County.
1865-1869.....	71	.50	54	17	56	15	3	6	5	23	29	5
1870.....	27	.89	23	4	18	9	.....	2	2	11	10	2
1871.....	19	.62	14	5	13	6	1	3	1	5	9	.....
1872.....	18	.47	10	8	12	6	.....	3	4	3	7	1
1873.....	8	.19	6	2	7	1	.....	1	.....	3	4	.....
1874.....	18	.44	14	4	11	7	1	1	1	3	10	2
1870-1874.....	90	.52	67	23	61	29	2	10	8	25	40	5
1875.....	26	.63	17	9	14	12	1	1	.....	6	13	5
1876.....	18	.46	15	3	6	12	.....	.....	1	5	10	2
1877.....	22	.52	16	6	15	7	.....	2	1	5	12	2
1878.....	21	.50	16	5	12	9	3	2	.....	5	7	4
1879.....	13	.31	10	3	5	8	.....	.....	.....	5	7	1
1875-1879.....	100	.48	74	26	52	48	4	5	2	26	49	14
1880.....	10	.20	5	5	8	2	.....	1	1	6	2	.....
1881.....	23	.49	19	4	15	8	.....	5	3	.....	14	1
1882.....	31	.64	23	8	23	8	1	4	3	8	12	3
1883.....	25	.47	18	7	11	14	.....	.....	2	8	15	.....
1884.....	22	.43	20	2	13	9	.....	1	1	6	11	3
1880-1884.....	111	.45	85	26	70	41	1	11	10	28	54	7
1885.....	20	.37	16	4	11	9	1	1	6	3	6	3
1886.....	17	.29	16	1	12	5	1	3	2	4	7	.....
1887.....	16	.25	13	3	8	8	2	.....	2	5	7	.....
1888.....	21	.42	20	1	15	6	.....	1	3	6	9	2
1889.....	24	.38	20	4	9	15	.....	2	5	7	10	.....
1885-1889.....	98	.34	85	13	55	43	4	7	18	25	39	5
Total, 25 years..	470	.46	365	105	294	176	14	39	43	127	211	36

* Not including Providence City.

WHOOPIING COUGH.

The mortality from whooping cough, in 1889, was 77.

There were 39 males and 38 females.

Of the 77 decedents, 36 were of native parentage and 41 of foreign.

Of the 77 decedents, 73 were under five years of age, 3 of five years and under ten, and 1 of twelve years of age.

There were 12 decedents in Kent county, and 63 in Providence county. Bristol and Newport counties, 1 each.

The mortality from whooping cough has not increased, in the average of annual number, during the last twenty years, but, in proportion to the increase of population, has decreased.

The following Table will show the proportion to whole number of deaths, by percentage, of each of twenty-three prominent causes of death, during each of the last fifteen years. It will afford a ready means of comparing the proportions of the same cause in different years, and of different causes in the same year and in different years.

TABLE XCI.

Presenting the Ratio of Mortality to the Whole Number Causes, for fifteen

CAUSES OF DEATH.	YEARS.					
	1875.	1876.	1877.	1878.	1879.	1880.
Accidents (all kinds).....	3.31	3.40	3.10	2.89	2.43	3.51
Apoplexy and Paralysis.....	3.61	4.01	4.25	4.45	5.21	4.67
Brain Diseases of.....	2.98	3.64	3.68	3.28	3.73	3.44
Bronchitis.....	1.39	1.46	1.62	1.89	1.47	1.98
Cancer.....	2.31	2.72	3.17	2.82	2.96	2.72
Cholera Infantum.....	7.74	6.41	6.08	3.97	3.81	5.43
Consumption.....	15.79	16.78	15.52	15.98	15.09	14.02
Convulsions.....	2.43	2.28	1.95	2.65	2.47	2.88
Croup.....	2.33	2.61	2.23	2.20	2.28	1.45
Debility*.....	2.61	2.80	2.65	1.91	2.35	3.09
Diarrhœa.....	1.70	1.87	2.11	1.25	1.26	1.52
Diphtheria.....	.80	4.07	11.56	10.28	6.14	3.40
Dysentery.....	.88	1.28	1.22	.95	1.04	.61
Fevers.....	3.40	3.00	3.55	3.94	2.70	3.37
Heart, Diseases of.....	4.31	4.03	4.28	3.92	4.78	5.03
Hooping Cough.....	.75	1.23	.75	1.28	1.02	.44
Hydrocephalus.....	1.24	1.74	1.29	1.65	1.36	1.01
Kidneys, Diseases of.....	1.58	1.28	1.57	1.89	1.88	2.02
Liver, Diseases of.....	1.14	1.15	1.06	1.06	1.17	1.20
Marasmus.....	1.46	1.13	.99	1.30	1.16	1.27
Old Age.....	5.25	6.18	5.00	5.25	5.22	5.95
Pneumonia.....	7.83	8.69	5.31	7.49	7.37	7.90
Scarlatina.....	4.50	2.05	1.46	2.03	7.37	9.99

* Not infantile.

TABLE XCI.—Continued.

of Specified Causes of Death, of twenty-three Prominent years, 1875-1889.

YEARS.								
1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.
3.04	3.44	2.84	3.80	3.09	3.22	3.25	3.01	3.46
5.23	5.52	5.39	5.78	5.38	5.69	4.17	5.50	5.17
3.84	3.60	3.50	2.97	3.61	3.11	3.29	3.43	3.03
1.80	2.08	2.04	2.29	3.09	2.96	2.77	3.42	4.20
3.11	2.75	3.30	3.03	3.59	2.77	2.50	2.99	3.03
5.15	6.77	4.73	6.31	5.16	6.27	5.60	7.08	6.80
15.12	15.33	15.01	14.34	14.45	14.12	11.19	12.13	11.61
2.18	2.29	2.47	2.70	2.06	2.06	2.51	2.31	2.17
2.16	1.60	1.40	1.55	1.74	1.55	1.79	1.19	1.28
2.61	2.69	1.14	2.87	2.45	2.91	1.18	1.38	2.07
1.65	1.87	2.55	2.20	1.55	1.59	2.09	1.20	1.40
4.63	2.10	1.89	2.31	1.83	3.90	4.53	2.86	2.93
.90	1.42	1.06	.78	.68	1.13	1.04	1.11	1.14
3.05	4.60	5.12	3.24	2.93	2.87	2.00	3.58	2.29
5.68	5.31	6.35	5.60	6.48	6.20	6.46	6.56	7.35
1.46	1.48	.17	.83	.79	.83	.32	.75	1.23
1.20	1.02	.87	.81	.31	.41	.41	.47	.20
1.69	1.79	2.43	2.52	3.14	2.64	2.66	3.24	3.38
.82	1.21	.83	.88	.87	1.08	1.34	1.19	1.30
1.11	1.62	2.02	1.62	2.15	.22	1.57	1.16	1.63
5.29	5.89	5.22	5.68	4.95	4.69	4.38	4.35	3.63
7.01	7.16	7.84	7.14	8.65	8.18	7.70	7.62	7.69
2.96	.94	.64	1.88	1.70	1.50	4.20	3.11	.82

TABLE XCII.

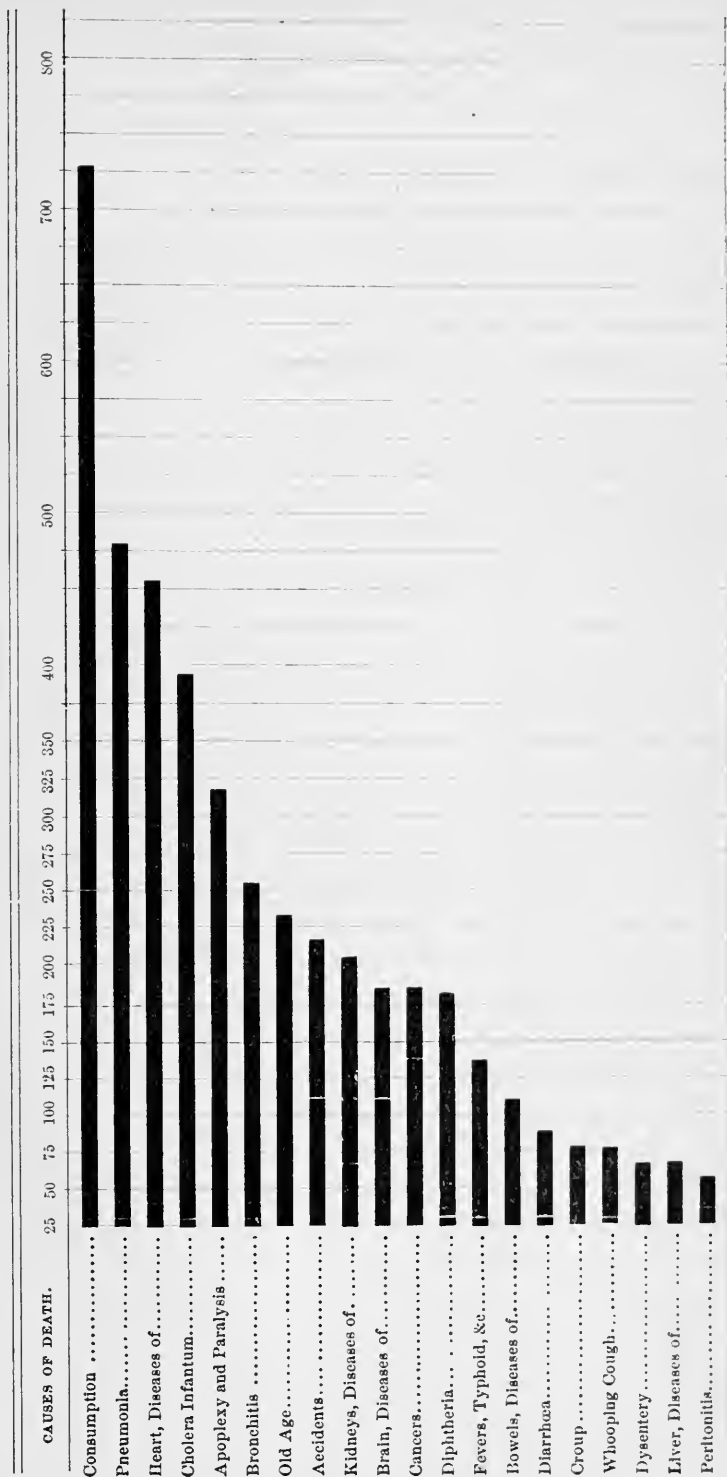
Principal Occupations and Causes of Death from June 1, 1852, to January 1, 1889, a period of Thirty-seven Years and Seven Months. Ages under 20 excluded.

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder Diseases.	Bowel Diseases.	Brain Diseases.	Bronchitis.	Cancer.	Diabetes.	Diarrhoea and Dysentery.	Dropsy.	Epilepsy.	Erysipelas.	Fever, Typhoid, etc.	Heart Diseases.	Hernia.	Insanity.	Kidney Diseases.	Liver Diseases.	Old Age.		Peritonitis.	Phtisis.	Pleurisy.	Pneumonia.	Rheumatism.	Stomach Diseases.	Suicide.	Tetanus.	
<i>Males.</i>																																
AGENTS.....	104	6	3	7	2	4	3	5	3	2	1	2	7	1	11	4	2	1	20	1	10	.....	2	3	.....	.....	.....	.....	.....	.....	.....	.....
BAKERS.....	92	5	..	12	1	3	1	3	1	5	1	1	3	8	1	6	3	5	30	...	4	3	2	2	1	.....	.....	.....	.....	.....	.....	.....
BANKERS AND BROKERS.....	81	3	.....	10	2	3	1	5	1	.....	.....	1	1	3	9	1	10	2	5	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
BARBERS.....	148	6	3	8	1	3	8	2	2	2	2	2	1	1	1	5	11	.....	.....	.....	6	2	2	2	08	.....	11	1	.....	.....	.....	.....
BLACKSMITHS.....	413	22	12	44	1	9	17	2	13	.....	9	11	2	4	1	18	98	.....	.....	.....	15	12	23	3	118	.....	34	3	5	6	.....	.....
BLEACHERS.....	40	1	1	1	1	1	2	2	1	.....	2	2	2	1	2	2	2	.....	.....	.....	1	.....	3	2	14	2	3	.....	1	.....	.....	.....
BOILERMAKERS.....	39	4	3	6	.....	2	2	2	.....	.....	1	.....	1	3	1	.....	.....	.....	.....	.....	.....	.....	.....	14	.....	1	1	.....	.....	.....	.....	.....
BOOKBINDERS.....	18	.....	1	.....	.....	2	2	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	6	.....	.....	.....	.....	.....	.....	.....	.....
BOOK-KEEPERS.....	247	15	4	21	1	3	1	8	3	1	4	1	3	2	.....	11	19	.....	1	18	7	6	1	85	1	23	1	2	4	1	.....	.....
CABINETMAKERS.....	92	3	1	8	1	3	5	1	2	1	1	1	1	1	.....	.....	9	.....	.....	3	5	15	.....	23	1	5	.....	1	1	.....	.....	.....
CALICO-PRINTERS.....	48	2	5	4	1	1	1	1	2	.....	.....	1	1	.....	.....	.....	6	.....	.....	.....	1	1	3	13	.....	3	.....	.....	.....	.....	.....	.....
CARPENTERS.....	1,278	105	18	101	2	12	24	42	11	43	5	31	24	5	9	1	63	106	3	11	46	26	98	9	322	5	106	12	13	23	2	.....
CARRIAGE MAKERS AND TRIMMERS.....	50	2	.....	6	.....	.....	.....	1	2	3	.....	1	1	1	1	1	1	2	.....	.....	5	4	2	14	.....	4	.....	.....	.....	.....	.....	.....
CIGARMAKERS.....	72	2	2	1	1	1	1	1	2	5	.....	.....	1	.....	.....	3	4	.....	.....	3	2	3	.....	32	.....	7	1	2	.....	.....	.....	.....
CLERGYMEN.....	158	3	.....	20	2	1	3	6	5	2	5	1	1	1	1	1	5	18	.....	4	6	12	17	.....	21	.....	19	1	1	3	.....	.....
CLERKS AND SALESMEN.....	594	24	7	30	4	15	14	7	10	4	7	.....	3	2	1	62	46	.....	6	33	6	2	5	206	1	76	9	5	9	.....	.....	.....
CONFECTIONERS.....	29	1	.....	1	1	1	1	1	1	1	.....	2	1	.....	.....	2	2	.....	.....	2	1	1	1	8	.....	2	.....	.....	.....	.....	.....	.....
COOPERS.....	99	3	1	14	1	2	3	1	2	1	1	1	2	.....	1	1	4	7	2	1	3	3	17	.....	18	1	7	.....	.....	.....	.....	.....
DENTISTS.....	15	.....	2	.....	.....	1	1	1	.....	.....	.....	.....	.....	.....	.....	3	2	.....	.....	.....	.....	.....	1	2	.....	2	.....	.....	.....	.....	.....	.....

TABLE XCII.

OCCUPATIONS.	Whole Number.	Accidents.	Alcoholism.	Apoplexy and Paralysis.	Asthma.	Bladder Diseases.	Bowel Diseases.	Brain Diseases.	Bronchitis.	Cancer.	Diabetes.	Diarrhea and Dysentery.	Dropsy.	Epilepsy.	Erysipelas.	Fevers, Typhoid, etc.	Heart Diseases.	Hernia.	Insanity.	Kidney Diseases.	Liver Diseases.	Old Age.	Peritonitis.	Phtisits.	Pleurisy.	Pneumonia.	Rheumatism.	Stomach Diseases.	Suicide.	Tetanus.		
Males.	STONECUTTERS AND MARBLE-WORKERS	155	11	1	4	1	3	4	2	4	1	3	2	1	10	17	3	2	2	5	57	14	2	4	2	4	2	2	2	2		
	STUDENTS	49	3	...	...	...	1	4	1	1	...	1	...	...	10	1	...	...	...	1	20	3	...	...	...	...	...	...	2	2
	TAILORS	276	10	7	21	2	8	5	4	7	...	8	4	...	...	1	7	31	...	1	20	9	13	...	88	1	17	3	2	2
	TEAMSTERS	303	40	20	...	3	7	3	1	12	1	6	4	1	8	2	25	...	2	13	7	8	3	...	08	2	9	3	4	3		
	TANNERS AND CARRIERS	32	4	3	...	...	1	2	...	...	...	...	...	...	1	1	4	...	1	1	4	...	4	...	2	2	...	...	...
	TEACHERS AND PROFESSORS	90	3	...	7	1	1	4	3	4	...	1	3	1	...	9	3	...	1	2	2	5	...	32	...	5	1	1	1	1		
	TINSMITHS	74	5	2	5	1	...	1	...	...	...	...	1	1	...	5	3	...	1	1	3	4	...	30	...	6	2	1	1	1
	UPHOLSTERS	31	3	...	1	...	...	...	...	...	...	...	...	...	1	1	3	...	...	3	...	...	...	14	...	3	...	1	1	1
	WHEELWRIGHTS	64	4	3	6	1	...	1	1	1	3	...	...	...	...	3	9	...	1	3	3	9	...	9	...	7	...	...	1	1
	MALES	23,620	1485	368	1968	94	260	493	659	291	710	113	493	475	88	191	58	1244	2011	55	200	816	532	1,974	88	5,994	115	2,082	187	252	301	33
	Females.	DRESSMAKERS AND SEAMSTRESSES	205	4	...	8	1	...	1	3	2	18	...	4	3	...	3	11	18	...	1	3	5	4	3	93	1	11	2	4	2	...
		MILLINERS	31	1	1	2	...	1	4	4	3	1	1	10	...	3
		NURSES	58	3	...	8	...	1	2	...	3	...	1	2	5	6	...	1	1	1	1	6	1	7	1	8	1	...
		OPERATIVES	473	5	1	9	...	10	4	6	12	...	7	4	...	3	31	20	...	2	8	4	6	5	292	2	30	3	6	3
TAILORSESSES		110	...	11	1	...	1	1	...	7	2	2	1	6	5	...	2	2	1	13	...	44	...	7	1	2	1	
TEACHERS		129	3	...	5	1	4	3	1	11	2	2	1	1	...	10	5	...	1	1	1	1	8	...	53	...	12	1	2	1	...	
FEMALES		1,006	16	1	41	2	1	18	13	9	53	4	17	10	1	7	67	58	...	7	18	13	37	10	499	4	71	7	14	8	...	
TOTAL		24,626	1501	369	1999	96	261	511	672	300	733	117	510	485	89	198	58	1311	2069	55	207	834	545	2,019	98	6,493	119	2,183	194	266	309	33

Diagram III. Exhibiting the comparative mortality by absolute number of decedents, from twenty principal causes of death in Rhode Island, in 1889.



APPENDIX A.

NOMENCLATURE OF DISEASES,

OR

CAUSES OF DEATH.



NAMES OF CAUSES OF DEATH.

It should be stated that the nomenclature of diseases in the nosological arrangement on the following pages is not intended to include the names of the whole list of morbid phenomena affecting the human organism; but the names of such only as are directly the **cause of death**, or such as ordinarily predispose to or set in motion the morbid processes that end in death.

In the construction of the classification now adopted, use has been made of the results and conclusions of a committee of the Royal College of Physicians of England, and from such other sources as were accessible, and from examination of the classifications in use in different countries in Europe and America. It has been the design to have all these classifications based on observed facts and most advanced conclusions in relation to pathological processes and morbid conditions, inductive, causative, progressive and ultimate.

The statistical nosology will consist of two lists of causes of death,

A TABULAR LIST AND SUPPLEMENTAL LIST.

The **TABULAR LIST** comprises the chief or primary causes of death which will be used in Table IX, on Classification and Percentage, in the preparation of the Registrar's annual reports, and will, therefore, include all those named in the **SUPPLEMENTAL LIST**, when the final arrangement is completed.

The **SUPPLEMENTAL LIST** is subordinate to the **TABULAR LIST**, and contains synonyms, or names of related diseases, which may be actually, or are supposed to be, causes of death, and which are in addition to those in the **TABULAR LIST**, and which are often found in **PHYSICIAN'S certificates of death**, as reported to the State Registrar. These will have a place, in alphabetical order, in Tables VII and VIII of the reports, and will be variously grouped under different heads in Table IX, as the figure which precedes each cause in the **SUPPLEMENTAL LIST** will correspond with the figure in the class and order in the **TABULAR LIST**, under which that cause is placed.

NOMENCLATURE OF CAUSES OF DEATH.

CLASSES.

- I. General Diseases.—A. SPECIFIC AND FEBRILE. (*Zymotic.*)
- II. General Diseases.—B. CACHECTIC. (*Constitutional.*)
- III. Special Diseases. —A. FUNCTIONAL OR ORGANIC. (*Local.*)
- IV. Special Diseases. —B. DEVELOPMENTAL. (*Developmental.*)
- V. Violent Deaths. —C. FROM INJURIES. (*Violence.*)

SUB GROUPS OR ORDERS.

CLASS I.—Zymotic Diseases.

ORDER ONE, Miasmatic. ORDER TWO, Enthetic. ORDER THREE, Dietic. ORDER FOUR, Parasitic.

CLASS II.—Constitutional Diseases.

ORDER ONE, Diathetic. ORDER TWO, Tubercular.

CLASS III.—Local Diseases.

ORDER ONE, Diseases of the Nervous System. ORDER TWO, Organs of Circulation. ORDER THREE, Organs of Respiration. ORDER FOUR, Organs of Digestion. ORDER FIVE, Urinary Organs. ORDER SIX, Reproductive Organs. ORDER SEVEN, Osseous and Locomotory Organs. ORDER EIGHT, Integumentary System.

CLASS IV.—Developmental Diseases.

ORDER ONE, Of Children. ORDER TWO, Of Women. ORDER THREE, Of Old Age. ORDER FOUR, Of Nutrition.

CLASS V.—Violent Deaths.

ORDER ONE, Accidents and Negligence. ORDER TWO, Homicide. ORDER THREE, Suicide.

STATISTICAL NOSOLOGY.

CLASS I.—Zymotic Diseases.

TABULAR LIST.

For Table IX of the Registration Report.

ORDER ONE.—Miasmatic.

- I. One.—1. Carbuncle
 2. Cholera, Asiatic
 3. Cholera, Sporadic
 4. Cholera Infantum
 5. Cholera Morbus
 6. Croup (Pseudo Membranous)
 7. Diphtheria
 8. Diarrhoea
 9. Dysentery
 10. Erysipelas
 11. Fever, Bilious
 12. Fever, Cerebro Spinal
 13. Fever, Intermittent
 14. Fever, Malarial
 15. Fever, Typhoid
 16. Fever, Typho-Malarial
 17. Fever, Unspecified
 18. Fever, Yellow
 19. Influenza (Epidemic)
 20. Measles
 21. Mumps
 22. Metria (Puerperal Fever)
 23. Pertussis
 24. Tonsillitis
 25. Scarlatina
 26. Small Pox
 27. Varicella

ORDER TWO.—Enthetic.

- I. Two.—1. Glanders
 2. Gonorrhæa
 3. Hydrophobia
 4. Malignant Pustule
 5. Septicæmia
 6. Syphilis

ORDER THREE.—Dietic.

- I. Three.—1. Alcoholism
 2. Delirium Tremens
 3. Inanition
 4. Purpura and Scurvy

ORDER FOUR.—Parasitic.

- I. Four.—1. Aphthæ
 2. Worms
 3. Other Parasites

SUPPLEMENTAL LIST.

Synonyms or Related Diseases.

ORDER ONE.—Miasmatic.

- I. One.—1. Anthrax.
 Gangrenous Boil.
 4. Entero Colitis, { Infantile.
 Gastro Enteritis, { tile.
 10. Hospital Gangrene.
 Pyæmia.
 Phlegadæna.
 Phlegmon.
 15. Infantile Fever.
 Typhus Fever.
 20. Rotheln.
 21. Parotitis.
 22. Child-bed Fever.
 23. Hooping Cough.
 24. Quinsy.
 25. Scarlet Fever.
 Angina Maligna.
 26. Varioloid.
 27. Chicken Pox.
 Miliaria.

ORDER TWO.—Enthetic.

- I. Two.—2. Stricture of the Urethra.
 Gonorrheal Ophthalmia.
 5. Necusia.

ORDER THREE.—Dietic.

- I. Three.—1. Intemperance.
 3. Privation.
 Starvation.
 Neglect.

ORDER FOUR.—Parasitic.

- I. Four.—1. Thrush.
 2. Tape Worm.
 Trichinæsis.
 3. Scabies.
 Hydatids.
 Porrigo, Favus, etc.

CAUSES OF DEATH.

CLASS II.—Constitutional Diseases.

TABULAR LIST.

ORDER One.—Diathetic.

- II. One.—1. Gout
 2. Dropsy
 3. Anæmia
 4. Cancer, Various
 5. Cancer of Breast
 6. Cancer of Stomach
 7. Cancer of Uterus
 8. Noma (Canker)
 9. Mortification
 10. Rheumatism

ORDER Two.—Tubercular.

- II. Two.—1. Scrofula
 2. Tabes Mesenterica
 3. Phthisis (Pulmonary)
 4. Hydrocephalus
 5. Tubercular Meningitis

SUPPLEMENTAL LIST.

- II. One.—2. Anasarca.
 3. Leucocythæmia.
 Chlorosis.
 4. Soft Cancer.
 Epithelioma.
 Melanosis.
 Lupus.
 Other kinds of Cancer.
 9. Bed Sore.
 Dry Gangrene.
 10. Rheumatic Carditis.
 Rheumatic Synovitis.
 Rheumatic Meningitis.

- II. Two.—1. Psoas (Lumbar) Abscess.
 White Swelling.
 Crocinism (Goutre).
 Adenitis.
 Morbus Coxarius.
 Pott's Disease.
 2. Tubercular Peritonitis.
 3. Hæmoptysis.

CLASS III.—Local Diseases.

ORDER One.—Nervous System

- III. One.—1. Cephalitis
 2. Cerebritis
 3. Apoplexy
 4. Paralysis
 5. Insanity
 6. Chorea
 7. Epilepsy
 8. Tetanus
 9. Convulsions
 10. *Brain Diseases**

ORDER Two.—Circulatory System.

- III. Two.—1. Pericarditis
 2. Aneurism
 3. *Heart Diseases**

- III. One.—1. Phrenitis.
 Meningitis.
 Cerebro Spinal Meningitis. (Sporadic.)
 5. Monomania.
 Fright.
 Grief.
 Melancholia.
 Dementia.
 Rage.
 6. Hysteria.
 8. Laryngismus.
 Lockjaw.
 Trismus Nascentium.
 10. Neuralgia, Cerebral.
 Neurasthenia.
 Disease of Spinal Cord.
 Necrencephalus (Ramollissement).

- III. Two.—1. Carditis.
 Endocarditis.
 3. Hypertrophia.
 Atrophia.
 Angina Pectoris.
 Syncope.
 Arteritis.
 Ossification of Arteries.
 Phlebitis.
 Hydropericardium.
 Embolus.
 Thrombosis.

* Not otherwise placed.

STATISTICAL NOSOLOGY.

CLASS III.—Local Diseases.—Continued.

TABULAR LIST.

ORDER Three.—Respiratory System.

- III. Three.—1. Epistaxis
 2. Laryngitis
 3. Bronchitis, Acute
 4. Bronchitis, Chronic
 5. Pleurisy
 6. Pneumonia
 7. Asthma
 8. *Lung Diseases**

ORDER Four.—Digestive System.

- III. Four.—1. Gastritis
 2. Enteritis
 3. Peritonitis
 4. Ascites
 5. Ulceration of Intestines
 6. Hernia
 7. Ileus
 8. Intussusception
 9. Stricture of Intestines
 10. Fistula
 11. *Stomach Diseases**
 12. *Pancreas Diseases**
 13. Hepatitis
 14. Jaundice
 15. *Liver Diseases**
 16. *Spleen Diseases**
 17. *Bowel Diseases**

ORDER Five.—Urinary System.

- III. Five.—1. Nephritis
 2. Ischuria
 3. Nephria (Bright's Disease)
 4. Diabetes
 5. Calculus (Gravel, &c)
 6. Cystitis
 7. Prostate, Disease of
 8. *Kidney Diseases**
 9. Bladder, Diseases of
 10. Testicles, Disease of

ORDER Six.—Generative System.

FEMALE.

- III. Six.—1. Ovarian Dropsy
 2. *Diseases of Uterus**

SUPPLEMENTAL LIST.

- III. Three.—2. Edema Glottidis.
 5. Empyema.
 Diaphragmitis.
 Pneumothorax.
 Hydrothorax.
 6. Pulmonary Apoplexy.
 Hæmoptysis.†
 Congestion of Lungs.
 7. Grinders' Asthma.
 Miners' Asthma.
 Emphysema.
- III. Four.—1. Glossitis.
 Stomatitis.
 Pharyngitis.
 Œsophagitis.
 2. Gastro Enteritis, } Not
 Enterocolitis, } lu-
 5. Perforation of— fan-
 6. Congenital, } tile.
 Femoral.
 Inguinal.
 Scrotal.
 Umbilical.
 Ventral.
 7. Constipation.
 Obstipation.
 Perityphlitis.
 Typhlitis.
 9. Strict Œsophagus.
 11. Dyspepsia.
 Pyrosis.
 Gastralgia.
 Hæmatemesis.
 Melena.
 14. Gall-stones.
 15. Cirrhosis.

- III. Five.—3. Albuminuria.
 6. Cystirrhœa.
 8. Diuresis.
 Hæmaturia.
 Uræmia.
 9. Urethritis.
 10. Orchitis.
 Hydrocele.

- III. Six.—1 Ovarian Tumor.
 2. Hysteritis Metritis.
 Uterine Ulcer.
 Polypus, Tumor Fi-
 broid.
 Ovaritis.
 Pelvic Cellulitis.

* Not otherwise placed.

† See Class II, Order Two—3, Sup. List.

CAUSES OF DEATH.

CLASS III.—Local Diseases.—Continued.

TABULAR LIST.

ORDER Seven.—Osseous and Locomotory System.

- III. Seven.—1. Bones, Diseases of . . .
 2. *Joint Diseases** . . .
 3. *Vertebræ*, Diseases of . . .

ORDER Eight.—Integumentary System.

- III. Eight.—1. Phlegmon† . . .
 2. Ulcer . . .
 3. *Skin Diseases* . . .

ORDER Nine.—Organs of Special Sense

EYE AND EAR.

- III. Nine.—1. Malignus Oculi . . .
 2. Ophthalmitis . . .
 3. Ossis Petrosi . . .
 4. Otitis . . .

SUPPLEMENTAL LIST.

- III. Seven.—1. Ostitis.
 Periostitis.
 Fragilitas Ossium.
 Mollities Ossium.
 Rickets.
 Caries, Necrosis.
 Exostosis.
 2. Synovitis.
 Hip Diseases.
 3. Spine Diseases.
 Spine, Caries and Necrosis.

- III. Eight.—1. Abscess, part not stated.
 Boil.
 Whitlow.
 3. Roseola.
 Urticaria.
 Eczema.
 Herpes.
 Pemphigus.
 Ecthyma.
 Impetigo.
 Psoriasis, &c.
 Dermatitis (from burns, &c.).

CLASS IV.—Developmental Diseases

ORDER One.—Developmental Diseases of Children.

- IV. One.—1. Still born . . .
 2. Debility, Infantile . . .
 3. Debility, Premature Birth . . .
 4. Cyanosis . . .
 5. Spina Bifida . . .
 6. Other Malformations . . .
 7. Teething . . .
 8. Innutrition . . .

- IV. One.—2. Asthenia.
 4. Atelectasis Pulmonum.
 6. Anus Imperforatus.
 Cleft Palate.
 Idiocy.
 8. Malnutrition.

* Not otherwise placed. † See Class II, Order Two—1, Sup. ‡ See Class I, Order One—10, Sup.

STATISTICAL NOSOLOGY.

CLASS IV.—Developmental Diseases.—Continued.

TABULAR LIST.

ORDER TWO.—Developmental Diseases of Women.

- IV. Two.—1. Paramenia
 2. Childbirth*

ORDER THREE.—Developmental Diseases of Old People.

- IV. Three.—1. Old Age

ORDER FOUR.—Diseases of Nutrition. Adolescent and Adult.

- IV. Four.—1. Atrophy
 2. Debility

SUPPLEMENTAL LIST.

- IV. Two.—1. Amenorrhœa.
 Chlorosis,†
 Climacteria.
 Menorrhagia.
 2. Miscarriage.
 Abortion.
 Puerperal Mania.
 Puerperal Convulsions.
 Phlegmasia Dolens.
 Cæsarian Operation.
 Extra-Uterine Fœtation.
 Flooding.
 Retention of Placenta.
 Presentation of Placenta.
 Deformed Pelvis.
 Mammary Abscess.

- IV. Four.—1. Marasmus.
 Malnutrition.
 2. Asthenia.
 Exhaustion.

CLASS V.—Violent Deaths.

ORDER ONE.—Accident or Negligence.

- V. One.—1. Fractures and Contusions .
 2. Wounds, Unspecified
 3. Burns and Scalds
 4. Poison
 5. Drowning
 6. Suffocation
 7. Various

ORDER TWO.—Homicide.

ORDER THREE.—Suicide.

- V. Three.—1. Wounds, Unspecified .
 Wounds, Pistol or Gunshot.
 Wounds, Knife
 2. Poison
 3. Drowning
 4. Hanging
 5. Otherwise

- V. One.—1. Railroad and other Accidents.
 5. Lost at Sea.
 6. Asphyxia.
 Strangulation.
 7. Exposure.
 Cold Water.
 Frozen.
 Heat.
 Lightning.
 Surgical Operation.

- V. Two.—1. Infanticide.
 Patricide.
 Matricide.
 Fratricide.
 Filicide, &c.

* See Class I, Order One—22, Tab. List.

† See Class II, Order One—3, Sup.

SUGGESTIONS

CONCERNING

PHYSICIANS' CERTIFICATES OF DEATH.

It should be the endeavor to specify the causes of death as definitely and correctly as possible. It is not unusual to find a return of death with the physician's certificate naming the cause of death "Paralysis," "Paraplegia," "Fits," "Convulsions," "Dropsy," etc., which are merely secondary or consecutive causes, simply symptoms only, or results of some organic lesion or pathological derangement. Sometimes the **alleged cause** is really the *final cause*, as in a case of termination of life by paralysis, but the cause given as paralysis **is not the determining cause**. Apoplexy, or some lesion of the nervous centres, must be the original and determining cause of paralysis, paraplegia, hemiplegia, etc., and the determining cause should be stated as the primary in the return or certificate.

Convulsions are the symptoms or results of some antecedent or concurrent disease. They follow meningitis and other structural lesions of the nervous centres: they also occur from reflex derangement or disturbance of the nervous centres, as, in children, from intestinal irritation, or from inflammation, as in gastritis, enteritis, nephritis, etc. In such cases they may be contributory to death, and perhaps, in rare instances, a final cause, by inducing or taking the form of tonic or tetanic spasm. But as contributory, or as a final cause, they are simply concomitant. They should find place as secondary causes only in certificates of death.

"Fits" is too unmeaning a term to be used in any case. The word in a medical sense literally means an attack, an occurrence, or succession of attacks of some physical or mental disturbance, as "fits of sickness," "fits of melancholy," etc., and is not properly used as synonymous with convulsions from any cause. It would be just as sensible to attribute a death to a "paroxysm," an "occurrence" or an "attack" as a cause, as to "fits," without other qualifications.

"Dropsy" and "Ascites" have been allowed to stand as determining causes of death because of extended use, and because of the obscurity with which their causes in rare instances are involved. We can scarcely conceive of a dropsical accumulation without antece-

dent organic or functional disorder, derangement of the absorbent or secretory system, or depravation of the blood. They are left in the tabular list with not a little reluctance. Paralysis is also left in the tabular list for a like reason, and with the same doubt of propriety.

It may be suggested that it is sometimes difficult, and occasionally impossible to ascertain positively the chief or leading cause of death. The physician last in attendance may find several functional or structural diseases, the morbid conditions multiple and complex, and not only the initial derangement, but the succession of morbid processes, proximate, consecutive and ultimate, inextricably entangled and lost to discovery.

The careful diagnostician will, however, even then be able to *conceive the probable leading cause*, but, whether or not, he will be able at least **to ascertain the most prominent and controlling lesion or functional derangement then existing**, and which may reasonably be accepted as the primary cause of death.

The preceding remark applies very properly to cases of adventitious diseases which prove fatal, when occurring in individuals already suffering from some chronic disease of slower progress, as when fatal dysentery attacks a consumptive person, or one having chronic nephritis dies from pneumonia. **The acute disease** occurring independently of the chronic disease **is the chief cause of death**, although the fatal event may have been made more sure by the existence of the antecedent disease, and although the antecedent disease would have ultimately caused death.

In attributing death to scrofula, tuberculosis, tumor, cancer and other generic terms, as causes, **the organic structure or locality where the disease is developed** should always be given, if possible, otherwise such terms are very indefinite, and might, in some instances, discredit the acquirements or carefulness of the certifying physician.

The objects desired in presenting the preceding nomenclature of causes of death, and the suggestions following, are to subserve the purpose of greater uniformity and precision in the use of nosological terms, and to promote the accomplishment of entire definiteness, accuracy and completeness in the physicians' certificates of causes of death.

The State of Rhode Island has a leading reputation for the completeness of its vital statistics. It is not excelled by any State in the Union. With the exception of two or three, there are no States that have approximate completeness of numbers of decedents, and fullness of statements of fact connected therewith. It is hoped that the physicians of Rhode Island will feel a professional and patriotic interest in the further elevation of the reputation of the State as a collector of accurate and complete vital statistics.



APPENDIX B.

THE LAWS OF RHODE ISLAND

IN RELATION TO THE REGISTRATION OF

BIRTHS, MARRIAGES AND DEATHS, AND OF DIVORCE.

PUBLIC STATUTES, CHAPTER 85, AND PUBLIC LAWS, CHAPTER 747.

OF THE REGISTRATION OF BIRTHS, DEATHS AND MARRIAGES.

SECTION 1. The town clerks of the several towns, or any person whom the board of aldermen of any city, or the town council of any town may appoint for that purpose, shall obtain, chronologically record and index, as required by the forms prescribed by section three of this chapter, all information concerning births, marriages and deaths occurring among the inhabitants of their respective towns; and on or before the first Monday in March, annually, shall make duly certified returns thereof to the secretary of the state board of health, for the year ending on the thirty-first day of December next preceding, accompanying the same with a list of the persons required by law to make returns to them, who have neglected to do so, and with such remarks relating to the object of this chapter as they may deem important to communicate.

SEC. 2. The secretary of the state board of health shall receive the returns made in pursuance of the preceding section, and annually make a general abstract and report thereof, in form as prescribed by section three of this chapter, and publish not exceeding one thousand copies thereof, and for preparing, tabulating and publishing said annual report the sum of five hundred dollars shall be paid to the state registrar. Said returns, after such report is prepared, shall be deposited in the office of the secretary of state, who shall cause the same to be arranged, full alphabetical indices of all the names to be made, and the whole to be bound in volumes of convenient size and carefully preserved in his office.

SEC. 3. The blank forms required to carry out the provisions of this chapter shall, on application, be furnished by the secretary of the state board of health to clergymen, physicians, undertakers, town clerks, clerks of meetings of the Society of Friends, and other persons requiring them, substantially as follows: The record of a birth shall state the date and place of birth, name and sex of the child, whether born alive or still-born, the name and surname, color, occupation, residence and birthplace of the parents, and the time of recording, so far as the same can be ascertained. The record of a marriage shall state the date of the marriage, place, name, residence and official station of the person by whom married, names and surnames of the parties, age, color, occupation and residence of each, condition, that is, whether single, widowed or divorced, what marriage, that is, whether first, second, third or other marriage, the occupation, birthplace and name of their parents, and the time of recording, so far as the same can be ascertained. The record of deaths shall state the date of death, name and surname of the deceased, the sex, color and condition, whether single or married, age, occupation, place of death, place of birth, names and birthplace of parents, disease or cause of death, and the time of recording, so far as can be ascertained.

SEC. 4. Every meeting of the Society of Friends, clergyman, and all others authorized to join persons in marriage, shall make a faithful record of every such rite performed by them, in manner and form aforesaid, and return the same for the last preceding month, on or before the second Monday of every month, to the town clerk of the town in which such rite shall have been performed; and no marriage shall be solemnized until the parties shall have signed and delivered to the person about to solemnize it, or to the clerk of a meeting of the Society of Friends, a certificate containing the information required for the record of a marriage, as prescribed by this chapter.

SEC. 5. The town clerk of every town shall annually, in the month of January, collect the information required by this chapter, in relation to all children born in the town during the year ending on the thirty-first day of December next preceding.

SEC. 6. Whenever any person shall die, or any still born child shall be brought forth in this state, the physician attending at such bringing forth or last sickness, if any physician so attended, shall, within forty-eight hours after such death or bringing forth, leave with the family, if any, or person having the care of the deceased, or the person bringing forth such still born child, or give to the undertaker or person who conducts the funeral a certificate stating, in case of a death, the name of the deceased, the date of the death, and the disease or cause of the death, and in case of the bringing forth of a still born child, the date and the cause of such child being brought forth still born. Provided, however, if the physician last in attendance shall not have knowledge of such death, or is otherwise reasonably prevented from leaving with the family or giving the undertaker such certificate within the time hereinbefore specified, or before the funeral or disposal of the remains of the deceased, he shall, within five days after having

knowledge of such death by notification or otherwise, send to the town or city clerk or registrar of the town or city in which such death occurred a certificate, stating the name, date and disease or cause of death of such decedent.

SEC. 7. Every town council may appoint a sufficient number of persons to act as undertakers, removable at the pleasure of such council.

SEC. 8. No undertaker or other person shall conduct a funeral, or bury or deposit in a tomb, or remove from this state, or otherwise dispose of the remains of any deceased person or still born child unless he shall first obtain the physician's certificate required by section six of this chapter, if a physician was in attendance upon such person who has deceased, or the person bringing forth such still born child, and shall return the same, together with his own certificate of the information required by section three of this chapter, to the town clerk of the town where such death or bringing forth took place. Provided, however, that in such towns as allow the burial or removal of the bodies of deceased persons without a permit from the town clerk, and the undertaker or other person who has charge of the disposal of the remains of the deceased person is unable to obtain the said physician's certificate, after reasonable attempts therefor before the burial or removal of the said remains, then the said undertaker or other person shall make his return as required by section three of this chapter, including the cause of death and the name of the physician last in attendance upon the deceased, immediately to the town or city clerk or registrar of the town or city in which the death occurred. He shall, also, within two days thereafter, notify the physician last in attendance upon the deceased person of the name and date of death of the same.

SEC. 9. Any town may make ordinances more effectually to attain the objects herein contemplated.

SEC. 10. The town clerks, or persons appointed as aforesaid, shall receive for each record of a death made and returned as required by law, and for each record of a marriage made and returned as required by law, twenty cents, to be paid to them out of their respective town treasuries: *Provided*, that the yearly compensation to be paid out of the town treasury as aforesaid, to any one town clerk or person appointed as aforesaid, who shall perform the duties prescribed by this chapter shall not be less than five dollars. Undertakers and others making returns of death as required by sections six and eight of this chapter, shall receive for each full report of a death made to the town clerk five cents in the cities of Providence and Newport, and ten cents in the other towns of the state.

SEC. 11. Every clergyman, physician, undertaker, town clerk, clerk of any meeting of the Society of Friends, or other person who shall wilfully or unreasonably neglect or refuse to perform any of the duties imposed on or required of him by this chapter, shall be fined not exceeding twenty dollars nor less than two dollars for each offence, one-half thereof to the use of the town in which the offence shall occur, and one-half thereof to the use of the person who shall complain of the same.

SEC. 12. Every clergyman, physician, coroner, undertaker, medical examiner,

or clerk of any meeting of the Society of Friends, shall cause his name, residence and post office address to be recorded in the town clerk's office of the town where he resides.

SEC. 13. No letters of administration or letters testamentary shall be granted by any court of probate, upon the estate of any person, until the death of such person, or the facts from which the same is presumed, shall be duly certified, as near as may be, to the town clerk, in order that the same may be duly registered according to the provisions of this chapter.

SEC. 14. The town clerks of the several towns, the city clerk of the city of Newport, and the city registrar of the city of Providence, shall have the custody of all records of births, deaths and marriages of their respective towns, whether made under the statutes now in force or any former statute, and a certificate signed by them, certifying that any written or printed statement of any marriage, birth or death is a true copy of the record in their custody, shall be admitted as evidence of such marriage, birth or death.

SEC. 15. Births, marriages and deaths of non-residents shall be distinguished from those of residents, in the returns, by being arranged separately.

SEC. 16. The secretary of the state board of health may, from time to time, vary the forms of returns, and require such additional information as he may consider necessary to accomplish the object of this chapter.

SEC. 17. The town clerks or other officers appointed under this chapter to collect, record and return the births in the several towns, shall receive fees therefor as follows: For making record and return of these facts as required by law, twenty cents each for the first fifty entries in each calendar year, and ten cents each for each subsequent entry and return; to be paid by the town in which the birth is recorded.

SEC. 18. The town clerks of the several towns, or other persons appointed under this chapter to collect the births in the several towns, shall annually in the month of January collect the facts concerning the births within their respective towns, required by this chapter; and shall, so far as practicable, at the same time collect the names of all persons liable to be enrolled in the militia, as required by title thirty-four; and the census of all persons between the ages of five and fifteen years inclusive, as provided by chapter fifty; and shall receive therefor such compensation as the town council or the board of aldermen of their respective towns or cities shall determine: *Provided*, that the city of Providence shall be exempt from so much of the provisions of this section as relates to the collection of the statistics of births.

SEC. 19. Blanks for the foregoing purposes shall be furnished, on application therefor, on or before the first day of December in the year preceding, by the state board of health for the collection of births, by the adjutant-general for the taking of the enrolled militia, and by the commissioner of public schools for the census aforesaid.

SEC. 20. The person or persons who shall discharge the duties required by

section eighteen of this chapter, if other than the town clerk, shall make full return thereof to the town clerk of his or their town, on or before the tenth day of February next following.

SEC. 21. The returns required to be made by clerks of the supreme court, in relation to divorces, to the secretary of the state board of health, or a prepared abstract thereof, shall be published in the annual report on the births, marriages and deaths in the state.

SYNOPSIS OF THE LAW OF MARRIAGE.

CHAPTER 163, PUBLIC STATUTES.

SECTIONS 1, 2 and 3 show what kindred persons cannot marry, and declare marriages within prohibited degrees null and void.

SECTION 4 makes an exception in favor of Jews, within the degrees of affinity or consanguinity allowed by their religion.

SECTION 5 declares the marriage of persons having a husband or wife living, and of idiots and of lunatics, absolutely void.

SEC. 6. "Any ordained minister or elder of any religious denomination, who shall be *domiciled* in this state, and either justice of the supreme court, may join persons in marriage in any town in the state." (It will be seen that clergymen from other states *cannot* **LAWFULLY solemnize marriages** in Rhode Island.)

SEC. 8. Wardens in the town of New Shoreham may join persons in marriage in said town.

SECTION 9 provides that no minister, elder, magistrate or warden shall join persons in marriage, unless such persons, *if residents of this state*, shall first present (to the clergyman or other person officiating) a certificate properly executed and signed by the town or city clerk or city registrar of the town or city in which **EACH of such persons shall RESPECTIVELY reside**, and *if not residents of this state*, then from the town or city clerk or registrar of *the town or city in which the marriage shall be solemnized*, to the effect that the said town or city clerk or registrar has **duly recorded the intention** of marriage between the parties named in the certificate, the said certificate also setting forth the names and surnames of the parties, the age, color, occupation, birthplace and residence of each, whether either or both have been before married, and, if before married, whether the marriage intended is the first, second,

third or other marriage, and also whether the condition of either or both persons previously married is that of a divorced person, and the names, occupation and birthplace of each of their parents; and no town or city clerk or city registrar shall issue such certificate to any minor person under guardianship, unless the consent in writing of the parent or guardian shall have been first obtained thereto: provided, however, such certificate may be issued to a female over eighteen years of age, who has no parent or guardian living in the United States. (The legal minority of both sexes terminates at the age of twenty-one.)

SECTION 10 provides that every Society of Friends, and *every person* authorized to join persons in marriage, *shall certify* upon the certificate required in section nine of this chapter *the time when and the place where* the marriage shall have been solemnized by him, and *shall on or before the second Monday of every month*, return the certificate of every marriage solemnized by him during the last preceding month to the *clerk or registrar* of the *TOWN or CITY in which such rite shall have been performed*.

SECTION 11 forbids the solemnization of the marriage ceremony, by any person, when lawful objection is made thereto in writing, until such lawful objection be removed.

SECTIONS 12 and 13 provide that any person who shall join persons in marriage without first receiving the certificate required in section nine of this chapter, or otherwise contrary to or in violation of chapter 163 of the Public Statutes, shall be imprisoned not exceeding six months, or fined not exceeding one thousand dollars.

SECTION 14 provides that ALL PERSONS married without duly proceeding as required by chapter 163, shall be fined not exceeding fifty dollars.

SEC. 15. The solemnization of marriage shall be in the presence of two witnesses at least, besides the minister, elder or magistrate officiating.

SECTION 16 relates to marriage among Quakers or Friends, and among Jews, making them valid if in accordance with the forms, rites and ceremonies of the same respectively.

SECTION 17 provides that at least one of the parties to any marriage solemnized according to the manner and form of the Society of Friends, or rites and ceremonies of the Jewish religion shall, before the celebration thereof, sign and deliver to the town or city clerk or city registrar of the town or city in which such marriage is solemnized, the certificate required in section nine.

CHAPTER 167.

OF DIVORCE.

SECTION 1. Divorces from the bond of marriage shall be decreed in case of any marriage originally void or voidable by law, and in case either party is for crime deemed to be or treated as if civilly dead, or, from absence or other circumstances, may be presumed to be naturally dead.

SEC. 2. Divorces shall be decreed for impotency, adultery, extreme cruelty, wilful desertion for five years of either of the parties, or for such desertion for a shorter period of time in the discretion of the court, for continued drunkenness, for neglect or refusal on the part of the husband, being of sufficient ability, to provide necessaries for the subsistence of his wife; and for any other gross misbehavior and wickedness in either of the parties, repugnant to and in violation of the marriage covenant.

SEC. 3. Whenever it shall appear that the absence, adultery, cruelty, desertion or other cause of complaint, as aforesaid, was committed or occasioned by the collusion of the parties, and done and contrived with an intention to procure a divorce, in such case no divorce shall be decreed.

SEC. 4. Whenever a divorce shall be had for the causes of affinity, consanguinity, impotency, idiocy, lunacy or crime of either of the parties, the wife shall have restored to her all her lands, tenements and hereditaments; and a judgment may be passed for a restoration to her of all or such part of the personal estate specifically, or the value thereof, which has come to the husband's hands by virtue of the marriage, as the court from the circumstances of the case shall deem equitable.

SEC. 5. Whenever the divorce shall be occasioned by adultery, or other of the causes aforesaid, done or committed on the part of the wife, the husband shall hold the personal estate not secured to her by law, forever, and her real estate not secured to her by law during his natural life, in case they have had issue born alive of her body during the marriage, otherwise during her natural life only, if he shall survive her.

SEC. 6. The court may, in such case, allow the wife for her subsistence so much of her real and personal estate as they shall deem necessary or proper.

SEC. 7. Whenever a divorce is granted for adultery or crime on the part of the husband, the wife shall be entitled to dower in the same manner as if he were dead, unless the court shall decree alimony, chargeable upon the estate of the husband, instead of such dower.

SEC. 8. Whenever a divorce shall be had for adultery, or for any of the causes aforesaid, done or committed on the part of the husband, the wife shall continue to hold all her property, real and personal, secured to her by law, free from any right in or control over her disposition of the same, either during her life or at her death; and, if there be no issue living, shall be restored to all other her lands, tenements and hereditaments, if any there be.

SEC. 9. In such case the wife shall also be allowed out of the real or personal estate of the husband, or out of both, such alimony as the court shall think reasonable, not exceeding the use of one moiety of his real estate, during the life of the wife, and the property of one-half of his personal estate, having regard to the personal property that came to the husband by the marriage, and his ability.

SEC. 10. If there be issue living at the time of the divorce, the court, with regard to ordering restoration to the wife of such of her lands, tenements or hereditaments, if any, as may not be secured to her by law, and in regard to the amount of alimony to be allowed to her out of the property of the husband, may do as they shall judge the circumstances of the case may require.

SEC. 11. Divorces from bed, board, and future cohabitation, until the parties be reconciled, may be granted for any of the causes for which by law a divorce from the bond of marriage may be decreed, and for such other causes as may seem to require the same.

SEC. 12. In case of such divorce, the court may assign to the petitioner a separate maintenance out of the estate or property of the husband or wife, as the case may be, in such manner, and of such amount as they may think necessary or proper.

SEC. 13. Every petition shall be signed by the petitioner, if of sound mind and of legal age to consent to marriage, otherwise upon application to the court, and after notice to the party in whose name the petition shall be filed, the court may allow such petition to be signed by a guardian or next friend.

SEC. 14. All jurisdiction over divorce, alimony, separate maintenance, or the custody, education, and support of the children of persons divorced or petitioning for a divorce, is vested in the supreme court.

SEC. 15. Said court shall have no cognizance of or jurisdiction over any petition for the same, or either of the same, unless the petitioner shall, at the time of preferring such petition, be a domiciled inhabitant of this state, and have resided therein for the period of one year, next before the preferring of such petition.

SEC. 16. All such petitions shall be filed, heard and tried in the county in which the petitioner shall reside.

SEC. 17. The said court may, by general rule or otherwise, prescribe the notice to be given, within or without the state, on such petitions, and may issue such process as may be necessary to carry into effect all powers conferred upon them in relation to the same.

SECTIONS 18, 19 and 20 contain provisions in relation to citations to adverse party residing without the state, or in parts unknown.

SEC. 21. Whenever any citation, issued under the provisions of this chapter, shall be served by a disinterested person, such person shall return the same, having made oath thereon of the place where, the time when, and the manner in which he shall have made service of the said citations.

SECTION 22 provides for giving and ensuring proper and sufficient notice to the adverse party.

SEC. 23. The said court is empowered to regulate the custody, and provide for the education, maintenance and support of the children of all persons by them divorced or petitioning for a divorce, and of all persons to whom a separate maintenance may be granted, or who may petition for the same; to make such allowance to the wife, out of the estate of her husband, for the purpose of enabling her to prosecute or defend against any such petition for divorce or separate maintenance, in case she has no property of her own available for such purpose, as they may think reasonable and proper; and to make all necessary orders and decrees concerning the same, and the same at any time to alter, amend and annul for sufficient cause, after notice to the parties interested therein.

SEC. 24. The said court may authorize a married woman to whom a divorce from the bond of marriage is decreed to change her name, with the same rights and liabilities as if her name had not been changed.

SEC. 25. After the filing and during the pendency of any petition under this chapter, the supreme court may, as in equity, make such interlocutory decrees, or grant such temporary injunctions as may be necessary, until a hearing can be had before the court.

CHAPTER 198.

OF DIVORCES.

SECTION 5. The clerks of the supreme courts in the several counties shall make returns to the secretary of the state board of health, on or before the first day of March, in each and every year, for the year ending on the thirty-first day of December preceding, of all the applications for divorce, showing the number, the number granted, and the causes which are given for the application, but without the names of the parties, in accordance with the blanks which shall be furnished them by the secretary of the state board of health.



INDEX.

See, also, CONTENTS, page vii.

Accidents.....	18, 172
Alcoholism.....	18, 174
Ages at time of death.....	152
Apoplexy. <i>Tables</i>	18, 176
Births, plural.....	8, 119
" thirty-six years.....	95
" diagram of.....	106
" illegitimate. <i>Table</i>	125
" still born. <i>Table</i>	122
" sex, season, parentage, color, etc.....	109-125
" rates in towns.....	100
Brain, diseases of. <i>Table</i>	19, 178
Bronchitis. <i>Table</i>	20, 180
Cancers. <i>Table</i>	20, 182
Causes of death, alphabetically arranged.....	18, 165
" " nosologically arranged, 36 years.....	50-65
Child birth. <i>Table</i>	21, 184
Cholera infantum. <i>Table</i>	21, 186
Comparative statistics and comments.....	169-220
Consumption. <i>Tables</i>	21, 188-193
Croup. <i>Tables</i>	22, 193
Deaths, by counties.....	10
" causes of. <i>Tables</i>	50, 159
" " alphabetical order, months.....	18
" " " ages, etc.....	30, 153-156
" classification and percentage. <i>Tables</i>	42
" diagram of.....	160
" rates of, in towns.....	12, 100
" " in counties, etc.....	16, 146
Decedents, sex, season, parentage, age, color, etc. <i>Tables</i>	145-158
" occupation and age. <i>Tables</i>	66-76
" " causes of death. <i>Tables</i>	77-88, 224
" colored.....	156
Diarrhœa and dysentery. <i>Table</i>	22, 195
Diagram I. Birth rates.....	106

Diagram II. Death rates.	160
“ III. Deaths, proportional comparison of causes of.	227
Diphtheria. <i>Tables</i>	22, 197
Divorces. <i>Tables</i>	139-144
“ ratio of to marriages, different States. <i>Table</i>	144
Dropsy.	210
Fevers, malarial.	23, 199
“ typhoid, etc. <i>Tables</i>	23, 199
“ percentage in different States. <i>Table</i>	202
Heart, diseases of. <i>Tables</i>	23, 202-205
Hydrocephalus.	24
Illegitimates. <i>Table</i>	125
Insanity. <i>Table</i>	25, 206
Intemperance and alcoholism. <i>Table</i>	25, 174
Kidney, diseases of. <i>Table</i>	25, 208, 211
“ Bright's disease of.	25
Laryngitis.	25
Laws in relation to registration of births, marriages and deaths.	241
“ “ “ divorce.	246
“ of marriage.	245
Liver, diseases of. <i>Table</i>	25, 209
Malarial diseases, fevers.	199
Marriages, 1889. <i>Tables</i>	9, 126-138
“ nativity of. <i>Tables</i>	128
“ ages of persons married. <i>Tables</i>	130-133
“ colored.	137
“ of the divorced.	138
Measles.	26
Mother, number of child of. <i>Table</i>	118
Nomenclature of diseases.	231-237
Occupations and ages at death.	66-76
“ “ causes of death.	77-88
Old age. <i>Table</i>	26, 212
Paralysis. <i>Table</i>	26, 176
Peritonitis.	213
Physicians' certificates concerning death.	238
Pneumonia. <i>Tables</i>	213-216
Results, comparative, fifteen years. <i>Table</i>	222
Rheumatism.	39
Scarlatina. <i>Tables</i>	39, 216-218
Still born children. <i>Table</i>	122
Suicide. <i>Table</i>	40, 220
Whooping cough.	41, 221.

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